

which I attempted to relax a little the next Day ; but so violent an Effusion of Blood immediately ensued, that I thought her Life was in Danger, and I was obliged to make the Bandage tighter than before.

After the third or fourth Day, the Bandage and the Compress, filled with the fetid Blood, may be gently removed, being first softened with warm Wine, or Spirit of Wine ; so much of the Puff-ball as is loose may also be removed, leaving every Thing that has a strong Adhesion. New Compresses, dipped in warm Spirit of Wine, or digestive Fomentation, such as Lime-Water, or camphorated Spirit of Wine, must be directly applied, and secured with the Bandage as before, but a little more relaxed, that the Patient may be able to take some Aliment, which was before impossible, or extremely difficult. The second and third Dressings must be performed only every other Day, and the rest must be renewed every Day, because the Wound will discharge much Matter. In every Dressing it must be carefully observed, that none of the Compresses, Puff-ball or Lint be removed, but what are quite loose ; and when any of the first Lint comes away, the Wound must be again filled with fresh Lint, spread with some digestive Ointment, till all the Lint and Puff-ball come away spontaneously, which usually happens about the eighth or tenth Day. Then the Wound may be cleansed by some digestive Ointment, and inclosed with a vulnerary Balsam ; and the Cure may be completed with dry Lint, as in other Wounds. But it ought to be observed, in performing the Operation, to make the Wound behind the Cheek or maxillary Angle, that the Cicatrix may not deform the Face.

It is surprizing that *Garengot*, who is so ample in other Parts of Surgery, and even bestows a Chapter on this Operation, should take no Notice of the Method of stopping the Hemorrhage. He even asserts that there is no Occasion for any Remedies for suppressing the Effusion of Blood, in extirpating these Glands, or even indurated Breasts ; because only a few Drops of Blood will be emitted in removing the largest of these Tumors ; and that the Wound itself may be easily healed, by closing its Lips with a Suture. Hence, I think, it is evident, that in his general Doctrine he little regarded these indurated, parotid or maxillary Glands, or perhaps never saw the Operation. Hence we may see the pernicious Consequences of writing in general Terms, without Specifications of Exceptions. For it is certain, that whoever follows *Garengot's* Directions in this Operation, must unavoidably destroy the Patient by the Effusion of Blood, as happened to a Surgeon at *Jena*. This Case is related in the *Commerc. Lit. Norimberg. An. 1733*, where the Author adds this Observation, " That we may hence learn how much safer it is to relinquish these Tumors than to extirpate them." This Remark, however, should not deter the skilful Surgeon from the Operation, which I have often successfully performed myself, without the Death of one Patient. I must however allow, that *Garengot's* Assertion may hold in the Extirpation of scirrhus Glands in most other Parts of the Body. Extirpations of this Kind we meet with in *Koenigsen*, Obs. I. and in the Additions of *Tilingius* to *Scultetus*, published at *Leyden* in 1693.

As this Operation, however, is extremely dangerous, and often leaves a large Cicatrix, as these Tumors may sometimes be resolved by proper Remedies ; this Method ought certainly to be tried first, rather than to proceed directly to Extirpation. For this Purpose, anoint the scirrhus Tumors daily with Oil of Bricks or of Soap, and a little Camphire, or with warm Oil of Amber, or of Juniper ; apply over the indurated Part a Plaster of Diachylon, with the Diaphoretic Mercury of *Alysficht*, or the Soap Plaster of *Barbette*, with Oil of Amber or Juniper, or the like proper Digestive ; warm medicinal Bagns will likewise be proper for this Purpose.

In the mean time, internal Medicines are not to be neglected ; such as resolvent Decoctions of Swallow-wort and Fig-wort, which may be drank two or three times a Day, or taken in the Morning in Bed to raise a Sweat. Between these Draughts take every Day the Powders of burnt Sponge, Sal Gemma, Diaphoretic Antimony, or others of the like digestive Nature. Some prescribe as much bruised Lizards as will lie on the Point of a Knife. I have often found excellent Effects from the *Aethiops Mineral* and *Mercurius Dulcis* ; tho' in the Use of these Medicines it is proper to exhibit Purges at proper Intervals. But if all these Remedies prove ineffectual, it may not be improper, if agreeable to the Patient, to proceed to a Salivation ; which, according to *Agricola*, and other celebrated Physicians, has been very efficacious in dissolving scirrhus Tumors in the Neck ; and I have experienced its Virtues in some Cases.

But when a Scirrhus of this Kind is attended with an Inflammation, and resolves Medicines prove ineffectual, it may be proper to bring the Tumor to Suppuration, and treat it like an Abscess. And I have known Instances, wherein Dis-

cutients have made these indurated Glands, and also other Tumors of the Neck degenerate into an Abscess. But when the Disorder is inveterate, emollient suppurative Medicines will turn the increasing Tumor into a malignant Ulcer, or even into a Cancer ; and the same Effects are produced by the Application of Corrosives, which also occasion a great Effusion of Blood, and consequently Danger of immediate Death, as I had lately an unhappy Instance in a Person of Quality. *Heister's Surgery*.

**SALIVANTIA.** Medicines which excite a Salivation.

**SALIVARIS.** Pellitory of *Spain*. See **PIRETHRUM**.

**SALIVATIO.** A Salivation. See **MERCURIUS**.

A copious and artificial Evacuation of the Saliva is indicated :

1<sup>mo</sup>, By Crises which tend that Way.

2<sup>do</sup>, By the particular Nature of a Disease, especially when lodged in the Glands and *Membrana adiposa*. But in no Case is it more indicated than in a *Lues Venerea*. And,

3<sup>tio</sup>, By the Nature of an epidemical Disease.

The Body is most commodiously prepared for a Salivation, by the previous, duly continued, and liberal Use of attenuating, diluent, lenitive, and warm Decoctions of scabious, Pellitory of the Wall, Burdock, China Root, Sarsaparilla, Sassafras and Sanders.

A Salivation is excited,

1<sup>mo</sup>, By washing the Mouth with certain Liquors.

2<sup>do</sup>, By the slow and protracted Mastication of some viscid Matter, such as Mastich, Wax, and Myrrh, especially if acid Substances are mixed with these, such as Pellitory of *Spain*, the *Leucanthemum Canariense* Sapore Pyrethri, Ginger and Pepper.

3<sup>tio</sup>, By drawing into the Mouth acid and irritating Vapours, such as those of Tobacco, Sage, Rosemary, Marjoram, Thyme, and Mother of Thyme.

4<sup>to</sup>, A Salivation is excellently excited by the Action of such Medicines as produce a gentle but long continued Nausea, such as Antimony, neither entirely fixed nor totally emetic, taken with a small Quantity of common Vitriol.

5<sup>to</sup>, By such Substances as totally dissolve all the Parts of the Blood, convert it into Lymph, and render it fit for a Discharge by Way of Saliva ; such as crude Quicksilver, Cinnabar, a Solution of Quicksilver in Aqua fortis, white Precipitate, red Precipitate, Turbith Mineral, and sublimate Mercury dissolved. The Action of these Medicines is promoted by warm Fomentations applied to the Head, Neck and Face.

An excessive Salivation is lessened or stop'd :

1<sup>mo</sup>, By a large and continued Use of mild and tepid Drinks, such as Decoctions of Mallows, and Liquorice, in Milk and Water.

2<sup>do</sup>, By allaying the Impetus of the Humours by means of mild, oleous, and anodyne Emulsions, with a proper Addition of Diacodium or Opium. And,

3<sup>tio</sup>, By making a Revulsion of the Humours to other Parts, by any large Evacuation, especially that by Stool. But great Caution is necessary, lest the Impetus of the moved Matter, which in this Case is always acid, should rush to other Parts, and produce a greater Danger ; so that here the Caution of the Physician is necessary for the Safety of the Patient. *Boerhaav. Institut.*

It was no doubt owing to Chance that Mercury was discovered to be a Cure for the Pox, by Fluxing. But the Discovery, that it had such a Power of Fluxing, was not made at the same time. For *Guido* recommends an Ointment, which he calls the saracenic Ointment, for the Scabies, which *G. Forella* says, throws out the Humours by the Mouth. Now *Guido* wrote in 1363, long before the Pox was known in *Europe*. Besides, it is plain that this Property of Mercury was known to *Theodoric*, and even by the Way of Unction ; for he describes several Sorts of these Ointments, lays down the Rules, how often, and how long, the Unction should be continued, till the Flux rises. The Humour, he says, will flow out at the Mouth like a River ; and this Method he knows to be attended certainly with Success, in the *Malum Mortuum* and Scabies. This Author wrote soon after 1252.

These mercurial Applications were taken from the *Ara-bians*, *Rhazes* and *Avicenna*, and the rest, prescribe them in cutaneous Affections, without any View or Apprehensions of Fluxing. *Alfaharavins*, who was later, seems to have a Notion of this Effect ; for he treats of the Cure, when the Mouth, the Tongue, and the Throat were swelled, attended with Corrosion, and great Stinking, from mercurial Unctions.

The first Instance we have upon Record, of a Salivation being recommended, is in *Joh. de Vigo*, who wrote in 1518. He says there is nothing to be done in the Pox, but to use mercurial Unctions, which, by Salivation, cure it in a Week. The famous *Jacobus Carpus*, or *Berengarius Carpensit*, who was in great Reputation in the Beginning of this Century, is supposed



supposed to be the first who was Master of this Secret. Perhaps *J. de Vigo* might have learnt this Way of Unction from him. Indeed *G. Torella*, Physician to *Cesar Borgia*, and to Pope *Alexander the Sixth*, afterwards made Bishop of *St. Justa* by that Pope, mentions mercurial Unctions, but condemns them as pernicious; and takes notice how many Persons ignorant Quacks had killed by this Practice. *G. Torella* practised about 1498.

*Fracaſtorius* recommends mercurial Unctions and Fumigations of Cinnabar. Some time after *Aloysius Lobera*, a Spaniard, in a Treatise of his upon the Subject of the Pox, delivers the Method of Unction with great Exactness; orders the Room to be kept close and warm, and the Patient not to shift; and that the rubbing in of the Mercury should be continued till the Salivation comes on well, and the Symptoms abate. But the Time this may take up is undetermined. *Nicolaus Massa*, one of the best Anatomists of his Age, succeeded these Writers. He says the most secure and certain Method of curing the Pox, is Salivation; which may be done safely, even in Children, and Women with Child. He gives several Forms of Unctions, the Basis of all which are Lard and Mercury. He lays down Rules for preparing the Body, and guarding it against all Inconveniencies, and ill Accidents which may happen both during the Course and after it. He observes, that the Humour sometimes runs off, not only at the salivary Glands, but by Stool, Urine, or Sweat; and that not seldom with Success. He uses this Method of Unction sometimes for thirty-seven Days; continuing or intermitting it by Intervals, as Circumstances require. *Brasavolus* wrote in 1551. He has no new Instructions in him. *Fallopian*, his Scholar, read Lectures upon this Subject, about the Year 1555. He is the first who is particular in some Points relating to Salivation, either as to the Quantity of the Discharge, or the Length of the Course. The Measure he mentions is from seven to ten Pints a Day; and though sometimes ten Days, or thereabouts, be a sufficient Time for the Flux to continue, yet there are Cases, where he thinks it may be proper to prolong it, till the twentieth. However, he thinks this Method ought never to be attempted but where Sassa and Guajacum fail. *Freind's History of Physic*.

#### THE METHOD OF RAISING A SALIVATION BY FUMIGATIONS.

The Patient being first duly prepared, is placed naked in a proper Chair, or Stove; and small Pieces of Cinnabar, to the Quantity of two or three Drams, being thrown upon live Charcoal, the Steam is received through the Pores of the Skin. The Patient grows soon very warm, and sweats more or less, in Proportion to his Strength. This Operation is repeated every Day, or every other Day, till the Gums begin to swell and ulcerate, and the Spitting rises to a sufficient Quantity.

Some prefer Plaisters to Ointments; and it is certain, that the Effects of them are slower and milder. They are applied to the same Places, and with the same Precautions as the Ointment. (See below.) Others are of Opinion, that a Salivation is most safely raised, and afterwards either increased or diminished, as the Physician shall judge the Patient's Strength to require, by the internal Use of the mercurial Panacea: And it must be owned, that both Fumigations and Ointments are hazardous and uncertain; for Fumigations sometimes affect the Head, and produce direful Symptoms; and Ointments raise sometimes too great a Salivation, sometimes none at all; because a greater or smaller Quantity of the Quicksilver enters the Blood, according as the Pores of the Skin are wider or narrower; and this can never be known but by the Event. But the Usefulness and Excellence of the Panacea consists in this; that being given at first in small Doses, the Quantity of it may be increased at Pleasure, till the Patient spits the Quantity required; and this Quantity is either increased, diminished or continued the same at the Pleasure of the Physician, without any Fear of Danger. The other Methods of Salivating are not, however, altogether to be rejected; for it is sometimes necessary to mix them with the Use of the Panacea, which being slow in its Operation, the Ointment is to be used once or twice in some Cases, to bring the Spitting speedily to the desired Pitch. In Persons, therefore, of a very strong Constitution, the Salivation ought to be raised by Unction, and afterwards kept up by the Panacea; but in weak Habits the Panacea alone is to be depended on, or, at least, with the Assistance of only a few Plaisters. In Cases of violent continual Pains, Nodes, or Exostoses, Plaisters are, also, to be applied; as in the pocky Itch, Herpes, Ulcers, Scabs or Pustules spread over the Body, Ointments are most proper. Lastly, Fumigations are usefully mixed with Unctions, or with the Panacea, when there are Ulcers, Venereal or Condylomata in the Pudenda or Anus.

#### THE METHOD OF SALIVATING BY THE PANACEA.

The Patient is first to be let Blood once or twice, according to his Strength and the Fulness of his Vessels. The Day after the last Bleeding he ought to take a purging Potion, and at a proper Distance of Time, as two Hours or more, four Grains of Tartar Emetic, dissolved in weak Broth. The next Day he should go into a warm Bath, and repeat Bathing once or twice a Day for six or seven times.

By these Preparations the *Primæ Viæ* are cleared of their gross Contents, the Vessels are relaxed, the Blood circulates more clearly, the Juices become more fluid, and the solid Fibres softer, or less rigid. We ought, however, to take Care not to weaken the Patient too much, by Bleeding or Bathing, lest he be unable to bear a due Salivation; neither are Cathartics to be repeated, because they retard the Spitting: For though Venereal Diseases may be cured by Purging, yet Salivation is much more safe.

The Patient's Body being thus prepared, the next Day after his last Bathing, he ought to take ten Grains of Panacea in the Morning, and five in the Evening; the second Day fifteen Grains in the Morning, and eight in the Evening; the third Day twenty Grains in the Morning, and ten in the Evening; the fourth Day twenty-five Grains in the Morning, and fifteen in the Evening; and thus the Dose may be increased every Day from five to ten Grains, till the Quantity spit in twenty-four Hours amounts to three or four Pints; or the Evacuations by Stool are proportionable to that Quantity. No more Panacea is from thence to be given, except the Evacuations begin to lessen before all the venereal Symptoms disappear. In that Case, Recourse must again be had to the Panacea, beginning with the same Dose which the Patient took last, and continuing it till we are assured of a perfect Cure. If, after the Panacea is left off, the Salivation should increase, a Cathartic ought immediately to be thrown in, and frequently repeated at small Intervals. If, during the Salivation, a Looseness should happen with violent Gripings, and a Dysentery be apprehended, detergent, lenient, and strengthening Clysters are to be exhibited. During the whole time of the Cure, the Patient's Nourishment ought to consist of Broths, Eggs, Panada, and other Spoon-meats, but of nothing solid.

The Panacea ought to be given in some proper Conserve, drinking a Draught of Broth after each Dose; and for three or four Hours afterwards no kind of Nourishment should be given. When the Effects of the Panacea are quite over, the Patient ought to be purged two or three times, and then use a Milk Diet for a considerable time.

Nothing can be with Certainty fixed concerning the Quantity to be evacuated in a Salivation: For after the most copious Evacuations, some Patients have remained uncured; whereas others have been perfectly restored after a very slight Course. This, therefore, must be left to the Judgment of the Physician; as also, whether the Patient has Strength to go through a Salivation, when the venereal Disease is complicated with others. Thus, in a Constitution inclining to a hectic Fever, where the Blood being already too much dissolved, passes out of the Body in profuse Sweats, the Mercury, by dissolving it still more, would undoubtedly evacuate it by all the Emunctories of the Body, and Life along with it. In scorbutic Affections, though the Juices are said to be viscid and concreted, yet the Use of Quicksilver has often been fatal; because, as in these Diseases, the Salts in the Fluids are in greater Quantity and more caustic, than in those of the venereal Kind, yet their Force and Energy is much weaken'd by the Lensor of the Fluids; but, if by the Use of Quicksilver this Lensor is taken off, and the Juices made more fluid, the saline Spicula then prove greatly detrimental to the tender Membranes, by pricking and tearing them to Pieces; whence follow those intolerable Pains, Hemorrhages, Inflammations and Exulcerations, which arise from taking Mercury.

Quicksilver is said to be a great Enemy to the Nerves, being thought to bring on Weakness, Tremblings, and Palsies; but these Symptoms are not to be attributed to Quicksilver, so much as to the injudicious Use of it: For by giving it in very small Doses, the coagulated Humours are unequally dissolved, so that the concreted Portions which still remain, being hurried along by the more fluid Parts, enter the smallest Canals of the Body, and there stick and form Obstructions; which gradually increasing, both in Strength and Number, the Tone of the solid Parts is weakened and destroyed.

It has been often asked, on what the salivating and anti-venereal Virtue of Quicksilver depends. To explain this, some have, without Ground, had Recourse to Acids and Alcalies: But in the Cure of Venereal Diseases, this Medicine



acts neither as an Acid, nor as an Alkali, since it produces the same Effects, whether it be mixed with acid Salts, or be conveyed into the Blood perfectly crude and unmixed, as by Friction and Fumigation. Neither is their Opinion probable, who say that the venereal Poison is an Acid, since the Saliva of those affected with this Disease discovers no Signs of Acidity; but on the contrary, shews itself to be of an alkaline Nature, by turning Syrup of Violets green, raising an Effervescence with acid Liquors, and by corroding Copper. We are not, therefore, to imagine, that Quicksilver acts like an Absorbent or Alkali, by sheathing the acid Parts of the Poison, for other Absorbents would better answer that Intention. It is more probable, that all the Virtues and Energy of Quicksilver depend on two Qualities, its great Divisibility, and the spherical Figure of its Particles; by which it is enabled to penetrate the most inward Recesses of the Body, insinuate itself between all Parts of the Blood and Serum, and divide all Concretions found therein; not only by preventing their mutual Contact, but by increasing their Fluidity; a small solid Sphere being interposed between each two larger Molecules of the Juices. Again, as these Molecules stagnate at the Orifices of the very small Vessels, with the Globules of Mercury between them, they are fully exposed to the Force of the Solids, and of the circulating Fluids, and thereby divided and broke to Pieces, so as to be capable of passing through the smallest Canals of the Body.

Now, when we consider those Emunctories of the Body, which are capable of transmitting a thick viscid Lymph, we find them all reducible to the intestinal and salival Glands; for those of the Kidneys and Skin give Passage only to the finer Parts of the Lymph, because of the Smallness of the Vessels of which they are composed. And, hence it is, that sudorific Medicines have not a sufficient Effect in venereal Complaints, because they drive through the Pores of the Skin only the thinner Parts, leaving the more thick and viscid behind, which they cannot dissolve; but the salival and intestinal Glands are capable of secreting these more concreted Parts. Therefore, on taking Mercury, both or either of these Emunctories transmit this viscid Lymph, according as it is found in the Body in greater or smaller Quantities. This Excretion is made most commonly and most copiously by the salival Glands, because they are the most exquisitely sensible. But when the Lymph to be evacuated is very acrid, and capable of irritating and stimulating even the intestinal Glands to a sufficient Degree, it passes off, also, by these; so that the Determination of this Lymph to both, or to either of these Emunctories, depends on its Acrimony; and for this Reason it is, that when the Irritation of the intestinal Glands is very much increased by a Cathartic Medicine, the Excretion is principally made that Way, and the Salivation decreases, or may be totally stopped. *Grossroy.*

There are many ways of raising a Salivation, and all by Mercurial Preparations. The Preparations which I have used myself, says *Turner*, as the safest and most commodious, are Calomel and *Mercurius Dulcis* six times sublimed, given inwardly, in the milder Pox; or the same being faster radicated, and got into the Bones, the crude Mercury externally, in the way of Unction.

The *Mercurius Vite*, *Arcanum Corallinum* with the red, yellow and green Precipitates (however in Use with some) I think too churlish, and scarce safe for tender Constitutions; nor indeed can I see any Reason for their Use, whilst we have better and less hazardous Medicines to supply their Room.

In salivating by the internal Method, to an adult Person, of a tolerably good Habit, as to his Strength, and who has not been much used to the Medicine, I generally give fifteen Grains of Calomel with a little Conserve of Roses in the Morning, and the like Dose in as much of Diacordium without Honey, at Night, which I prefer to the larger given once, or, as customarily, twice a Day; because it is now less liable to run suddenly through them, or too hastily sublimed, and endanger them that way, by the Inflammation. Besides, in this gradual way of proceeding, it comes on more certainly, easily, and also more securely to the Patient; the Effect of each Dose affording Opportunity of foreseeing readily, what more be requisite, and when you must intermit, if not entirely forbear its farther Exhibition. I know a Physic Writer hath lately acquainted us, that we are each time to double the Dose of Calomel; as for the first, fifteen Grains, for the second half a Dram, for the third a Dram, and so till the Spitting comes on; but I would advise, that no Person take this Author for his Guide in this Affair, lest inadvertently he destroy his Patient, together with his own Reputation.

After three, four, or five Days of this Management, we usually observe the Fauces to enflame, the Inside of the Cheeks to become tumid, or high and thick, being ready to fall in betwixt the Teeth, upon shutting of the Mouth; the

Tongue looks white and foul, the Gums also stand out, the Breath stinks, (which is a favourable Omen of its coming on) and in general, the whole Inside of the Mouth appears shining, seems as it were parboiled, lying in Furrows, as it appears, after strong Spirits have been retained in the Mouth. They now begin to refuse their Nourishment, while the Tongue, Gums and Cheeks are swelled, and so sore that they cannot chew, especially solid Food, but must be now content with Liquids and the softer Aliments. Besides, they are often sick at the Stomach, and frequently puke, or bulk up a thin Phlegm; another promising Forerunner of a good Salivation, when the Pukes are moderate and easy, and come by Intervals. But if attended with *Cardialgia*, or violent Pains and Torture at the Stomach, perpetual and incessant Reachings, Fainting and cold Sweats, nothing is more dangerous.

The Inside of the Mouth beginning to appear thus whealed, you may expect soon after to find it ulcerated, especially about the salival Glands; and then it may be proper to desist for a Day or two, if not give over, that you may the better observe the Increase of the Ulcers, what Sloughs are likely to be raised, and of what Depth and Dimension they are like to prove; from which a near Conjecture may be made, of the Duration as well as Quantity of the Spitting, now begun; the Consistence of the effluent Lymph, being at the same time considered.

When the Salivation is thus raised, the Patient ought to be encouraged to proceed cheerfully; and to be sometimes refreshed with a little mulled Wine, of what Sort he likes best; but Red is preferable, if there be any Tendency to a Diarrhæa, adding a third, and sometimes one half of Water. Let his Diet be a small Chicken Broth, Water-Gruel and Pannada; his Drink a small Sack-Whey, or Posset-Drink, with a Draught of good Small Beer and a Toast between whiles: But in Gripes or a Looseness, the white Drink, prepared of calcined Hartshorn, or Rice-Water; also the Decoction of the Shavings of Hartshorn and Ivory, boiled with a Crust of Bread, and sweetened to the Patient's Taste, are to take Place of the rest.

Thus having given him some few Days Respite, if after the coming on of the Ptialism, you find him hearty, and his Chops but moderately swelled on the Outside, and not very sore within, the Ulcers not increasing, and few or no Sloughs appearing, the Flux also inconsiderable in Quantity, you may now again give him a Scruple of Calomel in Diacordium, as he goes to Rest, repeating the same for two or three Days following, as you find Occasion.

When in this Way he has taken about half an Ounce of Calomel (tho' there is seldom Occasion to go so high) with but little Alteration as to the Swelling or Soreness of his Mouth, and as little Appearance of the Ptialism; his Pulse and other Circumstances, with respect to any ill Symptom attending, favouring the same, he may be vomited with eight, nine, or ten Grains of the Turpeth Mineral by itself, only made into a Bolus with Conserve of Roses, or farther mixed up with half a Scruple, or fifteen Grains of the Calomel, encouraging the Operation with small Draughts of common Posset-Drink between whiles, upon each Motion to reach; but without loading his Stomach, as is customary in other Emetics, lest happening to run downwards, it invert the Order or Course of its intended Operation. The same Vomit, if found requisite, may be repeated two or three Days after, which at these Times often answers our End, by raising the Humours towards the Jaws, and forwarding the Salivation much more effectually, than more Doses of the Calomel, simply repeated, would have done; and if, after this, it should so happen, as in spite of all Endeavours to the contrary, it sometimes will, whether from some singular Idiosyncrasy, the Tenacity of the Lymph, or some Defect in the glandular Secretion, that the Spitting will not rise to any Quantity, notwithstanding the Tumefaction, Inflammation, Stench and Putrefaction, and sometimes Ulceration also in the Patient's Mouth, you must forbear and purge it off. The Relief of the Patient must now be attempted some other Way, as by giving Calomel once or twice a Week, and purging it off again next Day, or two Days after; and on the intervening Days, direct some other antivenereal Specific, such as the alterative Pill of Gum Guaiacum, diaphoretic Antimony, and the Æthiops Mineral, with a good strong Decoction of the Woods, well chosen and energetic, suiting also with the Temperament of the Patient; as, if cold and phlegmatic, the Scobs of Guaiacum; if hot and dry the Sarsaparilla and China Roots; which, however slighted by some as insignificant, yet observed with a strict Discipline, as to the other Non-naturals, have certainly very great Advantages attending them, as well perspiring the noxious Particles, and drying up the superfluous Serum by the one, as contempering the acrid and sour Juices by the other. By this Method, duly prosecuted, tho' it may be somewhat longer, the Purpose may be at length effected, which by the former



former was not to be obtained. Some have remarked, that those Persons who are purged with great Difficulty, are with great Difficulty salivated; which may arise from the same Cause, the Toughness of the Humours, and slower Secretion. Altho' in the Evacuation downwards, we often find thin, choleric, and dry Bodies, are more easily moved by Lenients, as common Oil, Manna, lenitive Electuary, Cassia, Diaprunum, even a Bit of fresh Butter, or fat Broth, than by stronger Purgatives of Scammony, Colocynth, and the like.

When the Ptyalism proceeds successfully, it may be left to take its Course, till it declines spontaneously, which, in Proportion to the Ulcers or Thickness of the Sloughs about the Parts of the Mouth, may happen at the Expiration of one and twenty Days, or sometimes a Month from the Time of its first Rising, which is usually long enough to subdue this Disease, after it is confirmed. I said, from the Time of its rising, or spitting perhaps a Pint and a half a Day, till it comes to three, four, or five Pints, in twenty four Hours, and so gradually goes off again; for often the first four or five Days, and sometimes a whole Week, is spent in bringing it to the first Proportion.

Besides, this Way of salivating by the Calomel, in the more stubborn and rebellious Pox, attended not only with cruel nocturnal Pains, Gummata, Tophi and Nodes, but also rotten or foul Bones; where the Patient has been long used to the taking of Calomel, or a like mercurial Preparation internally, and has perhaps been often salivated by such Preparations to no Purpose, it is better to attempt the Cure by salivating with the Unction, in which little Regard is to be had as to the Choice of the Ointment with which the Quicksilver is to be incorporated, since the Stress is entirely laid on the Quicksilver. In this Method, as well as in the other by Calomel, Care must be taken not to proceed too hastily.

If you have one Ounce of the Quicksilver to three Ounces of *Axungia* (which is the Proportion I have usually observed) about an eighth Part may be used Night and Morning; letting the Patient rub it gently with his own Hands, into his Limbs before the Fire, beginning from his Ancles up his Shins to his Knees, all round his Joints; and so to his Thighs, which are presently after to be covered close up with his Yarn Stockings and Flannel Drawers; then let him use the Remainder of this eighth Part about his Elbows, and so to his Shoulders, wiping his Fingers and Hands clean about the Glands of his Armpits, or those of his Groin: His Body being all the while defended from the cold Air, by a Screen or Blanket hung behind him, and after wrapt up warm in his Flannels, as he must also be in the other Method of salivating, such I mean as a Flannel Shirt or Shift, Waste-coat and Drawers, a Cap and Muffler pinning up thereto behind, and covering well his Throat, Chin, and Cheeks before, to keep these Parts from the cold Air, which above all is highly necessary.

Some also anoint the Trunk, especially the Spine; but I always found the Pores of the other Parts sufficient to let the Globules of the Mercury into the Blood; and it is not material by what particular Pores it had first its Admittance.

For those who are very weak, once a Day may suffice; but the robust and strong may be anointed twice, or, which is as well, and will save Trouble, divide the Unction into four Parts, and consume one Part about him every Night, after which let him enter into a warm Bed, with Flannel Sheets or Blankets, disposing him to a gentle breathing Sweat, with a Draught of warm Posset-drink, Mace-ale, or, if very feeble, a Cup of his mull'd Wine; by which the Pores being opened, the mercurial Particles may have the freer Entrance.

It is usual to increase the Mercury and Ointment to four Times the Quantity which we have directed. Thus *Harvey* prescribes one Pound of *Axungia* to be mixed with three Ounces, and sometimes six Ounces of Quicksilver, adding also a little white Ellebore and crude Antimony in fine Powder, pretending thereby to forward the Salivation, and increase the Force of Medicine in mastering any Malignity. *Mr. Wiseman's* Composition was also six Ounces of Mercury to one Pound of the other Materials, of which he used one Ounce, or two Ounces at a Time, once or twice a Day, for four, six, or eight Times, according to the Patient's Strength, and the Ease or Difficulty of raising the Flux. *Hildanus* directs six Ounces of Mercury to twenty Ounces of *Axungia*, and the other Ingredients. But I can see no Reason for using so much *Axungia*, provided a Half, or a fourth Part of it be sufficient to convey the Quicksilver into the Blood; nor to what End any other Ingredients should be added to the *Axungia*, unless the Turpentine, being, as I conceive, more like to hinder, especially the Species or Powders, by stopping up the Pores, than to forward the Operation. But leaving every one to follow the Proportion he likes best, in relation to my own, I must farther observe, that if after the third Unction, supposing the whole divided into four Parts, the Patient begins

to complain of his Chops, or that the Inside thereof appears ulcerated, you must stay a Day or two to see the Effect of what is already done, before you proceed farther. The like must be observed when Gripes, or bloody Stools approach. But if the Spitting comes not on, and no supervenient Symptom contra-indicates, you may expend the remaining fourth Part in like Manner; and perhaps in some Bodies, there may be Occasion for a Half, or full as much more. However, it will always be found safest to proceed leisurely, when you have gone thus far, and sometimes to wait a Day, two, or three, before you continue the Unctions; since altho' at first it may seem as if the Medicine had taken no Effect, you may soon after find it sufficient. For, tho' a Day or two after the fourth Unction, the Flux may be longer than usual in coming forwards, and the Excoriations about the Chops or Inside of the Mouth appear inconsiderable, yet in a Day or two more they may be seen to spread and increase to a copious Spitting, beyond what was expected. But when after rubbing in an Ounce, or an Ounce and a Half of the Mercurial Ointment, the Salivation appears not, it may also be necessary here to administer a Dose or two of the Turpeth Mineral, at a Day or two Days Distance; and where there are Gummata, Tophi and Nodes, you are in the Unction more especially to rub the Ointment well into these Parts, laying over them afterwards the *Emplastrum de Ranis*, with a double Quantity of Mercury. This will both help the Resolution of them, and encourage or keep up the Ptyalism, which being arrived to the Quantity of four, five, or six Pints, in a Day and Night, is accounted a sufficient Discharge. Yet this is no absolute Rule to go by, or upon which we can safely pronounce the Patient whole and sound, any more than the Quantity of the Medicine to be used, can be limited to any one certain, or constant Proportion. Since we have known some who have spit more, yet miss their Cure; whilst others who have come very short of such a Quantity, have notwithstanding obtained theirs. However, during the Salivation this Way raised, upon its too sudden Declension (tho' it commonly happens that the Sloughs being deeper, and their Mouths sorer, they usually spit longer than by proceeding internally with the Calomel) it is often expedient to give a Scruple of the same, every Day, or every other Day, for two or three Times, as there may be Occasion; and toward the Conclusion, you are to purge your Patient with two or three Ounces of the common Infusion of Senna, and one Ounce of the Syrup of Buckthorn, or for those that are very weak, an Infusion of sliced Rhubarb, Senna Leaves and Tamarinds, with Salt of Tartar, adding to the strain'd Liquor one Ounce of the best Manna, or solutive Syrup of Roses, which may be repeated once or twice a Week for two or three Times; and when he is a little easy, his Chops growing pretty well, he may be permitted to eat a little Meat, as the Flesh of a Chicken or Rabbit, also Veal or Mutton, but well roasted, without Sauce or Gravy. About this Time also, it is usual to sweat them, at least before they go abroad, in their Bed, or Stove, or under the Cradle, with Spirit of Wine burning just by, to be continued as their Strength will bear, for an Hour or two, and to be repeated at two or three Days Distance, if there be Occasion, observing that the utmost Care be now taken, that your Patient be not injured by the cold Air, and that he gradually cool himself, by lessening or withdrawing the Heat or Bed Cloths he lies under, lest getting Cold, he make some fresh Complaint of Pains, which, tho' arising from this new Occasion, he may impute to the old one, and think the worse of his Cure for some Time.

During his Sweat, let him rub his Body thoroughly with warm Napkins, conveyed to him in the Bed; and when faint, let his Spirits be kept up with three or four Spoonfuls of some proper cordial Julap, or a Draught of his burnt Wine.

In order to promote this Diaphoresis, he may take a little *Venice Treacle*, with a Scruple of the Cinnabar of Antimony, or half a Scruple of Bezoar Mineral, upon which let him drink a Draught of his Diet-drink, made as hot as he can bear it. This Drink he ought to be strictly confined to, for three Weeks or a Month after he comes out of the Salivation, that having by this Evacuation secured his Body from any Relicks of the Disease, or its Remedy, the redundant Serosity remaining after the Colligation may be dried up, before the Blood is supplied with fresh nutritious Juices. By the Neglect of this Circumstance, and by running over hastily to their wonted Liberty and Custom of Living, they too suddenly fill their Blood with a Load of improper and unsuitable Juice, at this Time in a weak infirm State, and despising their Purging, Sweating, or Diet, as needless Pieces of Formality, or an useless Penance, too often incur the Misfortune of an unhappy Relapse.

*Dr. Sydenham* indeed tells us, that the Salivation must take its Course, by which the Mercury, together with the pocky Venom, sufficiently spend themselves needing no other Help



or Way of Evacuation. But certainly, as I have sometimes found, 'tis ill trusting hereunto; for the Sluices being set open, so great a Colliquation, both of nutritive, as well as excrementitious Juices, has then happened, that if the Current were not otherwise to be diverted, and the Tone of the Blood after invigorated, some Patients would be in Danger of losing their Lives by the Ptyalism, or at least of falling into a Consumption; others from the impoverished and languid State of the Blood, are subject to incurable Dropsies; which has been the Fate of some, even where Endeavours have not been wanting to turn the Stream.

Yet I think this Author was not mistaken in his Opinion of the Pre-requisites of a Salivation, proposed as necessary by some; such as purging the Patient plentifully; which he has justly censured, as only needlessly harrassing the Body, impairing the Strength, and weakening the Spirits, of all which the Patient is now suddenly more than ever to stand in need, by reason of the Conflict which will be unavoidably excited by the Mercurial Particles in the Blood. However, a lenient Purgative two or three Days before, and the taking a little Blood, from those especially of a plethoric Habit, as also a more than ordinary Abstinence for such Space of Time, may be necessary to keep under a Fever, Dysentery, and Inflammation of the Parts; as also to moderate some other Symptoms which might create Trouble, when these Remedies are not so fit to be put in Practice. Bathing also in warm Water, for some lean, hot, and emaciated Patients, has been found serviceable. If the Case admits of Delay, the best Time for salivating is the more temperate Season, about the End of the Spring or the Beginning of Autumn; otherwise it may be enterprized at any other time, only taking Care to provide a good close Room with a Fire suitable, in the Winter or extreme cold Weather; and one more large and airy in the exceeding Heat of Summer. Let the Women, also, be laid down, just after the menstrual Purgation is over.

One thing of no small Moment in this Affair is, the Choice of a Nurse, who (if possible) should be a Person thoroughly acquainted with the Business, knowing how to succour them under their several Difficulties, taking care not only of their Mouths, by syringing where it is wanting, but of their Bowels, by Clysters, when they are called for to appease their Gripes, and remove the Tenesmus.

The first Accident which usually attends a Patient under a Salivation, is a *Diarrhœa* at the Beginning; and if not timely prevented, sometimes soon terminating in a Dysentery, accompanied with bloody Stools, and horrid Torture of the Bowels; which Accident may be removed in the following Manner.

Take of Diascordium, and Conserve of red Roses, each half an Ounce; Red Coral, finely triturated, and Japan, Earth, and true Bole, pulverated, each a Dram; Diascordium, enough to make them into an Electuary: Of which take about the Size of a Chestnut every fourth Hour, or oftner, during the Continuance of the Flux, drinking after three or four Spoonfuls, of the following Julap.

Take of Barley-Cinnamon Water six Ounces; Mint-Water, and Aqua Mirabilis, each two Ounces; Syrup of Quinces, one Ounce; mix them for a Julap.

Let his Drink be prepared of the Decoction of burnt Harts-Horn, coloured with a little Cochineal; and, when the Pains are very urgent, attended also with a Tenesmus, or perpetual Desire of going to Stool, discharging only a bloody Mucus, in the Intervals betwixt them, exhibit the following Clyster:

Take of the Decoction of burnt Harts-Horn, half a Pound; Diascordium, or Venice Treacle, half an Ounce; dissolve them in the White of an Egg, with two Ounces of Canary Wine. To be repeated as Occasion may require.

Which will, as a Fomentation, not only comfort the Intestines, and alleviate the griping Pain, but also, by its absorbent Quality, correct the sharp Humour, and thereby abate the Stimulus. But if, notwithstanding this Remedy, the Looseness still continues, prescribe thus:

Take of Diascordium without Honey, and Conserve of red Roses, each half an Ounce; the Barks of yellow Myrobalmans, and the Cinnamonum Acutum, a little bruised, each a Dram; Barley-Cinnamon Water, half a Pound: Infuse them warm for an Hour, then strain it; and add, of Mint-Water, an Ounce; Dr. Stephens's Water, two Ounces. Mix them, and (first

shaking the Bottle) take two or three Spoonfuls after every Stool.

Let him, also, at some times drink four or five Spoonfuls of Red Wine or Claret, boiled up with a third of Water and a little Spice, sweetened with double-refined Sugar; which will serve as well as any Cordial, and into which, under great Extremity of Pain, may be instilled twelve, fifteen or twenty Drops of the cydoniated Liquid Laudanum, especially at the Hour of Rest. Now although it must be allowed, that at these times there is nothing to be done without the Help of Opiates, yet the less Occasion we have for them the better; because by retarding or slackening the Motion of all the Fluids in general, together with the glandular Secretion, they are subject, also, to thicken the Lymph itself, which should be discharged by the Glandules of the Fauces. Wherefore, so soon as ever this Accident is overcome, you must lay them aside, forbidding Posset-Drink, Water-Gruel, Sack-Whey, but especially Malt Liquors, for some time; instead of which, as before advised, let him be kept strictly to the Decoction of burnt Harts-Horn, or Rice-Water. Let his Chicken be, also, boiled with a Crust of Bread, a little Rice, or a few Shavings of Harts-Horn. All which are gradually to be left off, and changed again for the more diluting Drinks, when the *Diarrhœa* is checked, and the Salivation comes forward; which is scarce to be expected so long as the Looseness continues, by which the Humours are carried downwards, the direct contrary way that they ought now to take.

In giving Opiates, the Consequence of one Dose is always to be observed, before another be ordered; which must be at about two Hours Distance, if there should be Occasion for a Repetition; the Quantity being increased according to the Age, Sex, Habit, and Strength of the Patient.

The next Accident we shall take notice of in raising a Mercurial Salivation, is the Sickness and Vomiting; which, if mild and gentle, may be let alone, only ordering the Patient to drink freely of a small Chicken-Broth, Posset-Drink, or thin Water-Gruel, that his Retching may be the easier; and giving a Sup of mulled Wine with a Sprig of Mint, a little Lemon-Peel, a Blade of Mace, or a bruised Clove infused in it, to comfort the Stomach, and refresh him between whiles; by which this Complaint (the Salivation soon after rising) goes off in few Days, without farther Trouble. But if Cardialgia, or racking and intolerable Pains about the Mouth of the Stomach appear, with incessant or perpetual Vomiting, Spasms of the Members, continual Sickness without Respite, Leptothymia or Fainting, with cold Sweats upon the Forehead and Eyebrows, the Patient is in the utmost Danger; and Mercury must not only be desisted from, but the Course of what has been given must be turned downwards, especially if costive, by directing the common emollient Clyster, with two or three Ounces of the coarse Sugar, and as much of Olive Oil; adding, if there be Occasion, as a Stimulus, a Dram or two of the *Species Hiera*, and as much Sal-Gem; while, in the mean time, you are using all Endeavours to take off the Orgasm in the Spirits, to compose the enraged Stomach, with some proper Cordial Julap, or the burnt Wine; with which, if his Pulse allow, you may mix an Opiate, in such Quantity as the Importance of the Complaint, and the Strength of the Patient shall indicate. A little mulled Sack, with Spice and a few Drops of Liquid Laudanum, after his Bowels are emptied by the Clyster, will sometimes answer: Or you may direct the following Mixture.

Take of the Water of black Cherries, and Barley-Cinnamon Water, each two Ounces; Spirit of Mint, one Ounce; prepared Crabs Eyes, and red Coral finely levigated, each half a Dram; Salt of Wormwood, one Dram; Syrup of Lemons or Quinces, an Ounce; *London* Laudanum, carefully dissolved, and mixed with the rest, two Grains. Mix them, and (after shaking the Bottle) give two Spoonfuls, every two Hours, sooner or later, as the Exigency may require, during the Vomiting and Pain of the Stomach.

Three or four Spoonfuls of simple Mint Water, well freed from the Empyreumatic Oil that comes over in the Distillation, and swims on the Top, supped hot as Tea is drunk, is, also, proper to alleviate this Illness; likewise Epithems or Decoctions of the Tops of *Roman* Wormwood, with some of the Aromatics, as the Roots of Galangals and Zedoary, the Calamus Aromaticus, Cloves, Nutmegs and Mace, in red Wine, are not improper. Flannel Cloths should be expressed from the same Decoction made hot, and applied to the Pit of the Stomach; after which the whole Region of the Stomach may be anointed with the expressed Oils of Mace and Nutmegs,



Nutmegs, adding a few Drops of the distilled Oil of Wormwood, and afterwards applying the great Stomachic Plaster.

For this Purpose I have likewise successfully prescribed the following.

Take of Hungary Water, and Liquid Laudanum, each one Ounce; dissolved Camphire, half a Dram; mix them for an Epithem; in which, when warmed, soak a piece of soft woollen Cloth, folded to the Breadth of four Fingers square; which, being strongly wrung, apply to the Pit of the Stomach, to be renewed when dry, or as Circumstances may require.

But this Symptom is often too powerful for these or any other Remedies, and frequently carries off the Patient in a few Hours; usually proceeding from the Ignorance of the Undertaker in hurrying on the Flux, giving disproportionate Doses of the Medicine, repeating them too fast, or continuing them longer than was proper; by which means the Patient is hurried to the Grave.

A third Complaint very usual at these Times (and which is always to be expected) is the soreness of the Chaps. For easing which, at least in some Measure, let the Patient hold in his Mouth, sometimes a little Barley Water, or Chicken Broth, made lukewarm; also now and then a little warm Milk, which is proper to lenify or assuage the Pain. But let them by no means use any restraining Mouth-waters or Gargarisms of Alum, Sage, Plantain, Bramble or the like; nor the digestive ones of fat Figs, the Roots of Marsh-mallows and Liquorice, Raisins, &c. lest by the one, you harden and dry the Ulcers, and stop the Current of the Rheum; by the other you too soon digest, and hasten off the Sloughs before their Time, and healing the Sores too soon, shorten the time of the Ptyalism. However when the mercurial Salts with those of the acid Lymph, have eaten deep into the Parts, by which the Putrefaction spreading there may be danger, by the Loss of Substance, of a foul Jaw Bone, at such Times the Surgeon must be careful to check the farther Erosion, and promote the Digestion of the Ulcer; consuming the rotten Flesh, by touching the Parts with fifteen or twenty Drops of the Spirit of Vitriol, mixed with an Ounce of the Honey of Roses. Let him also take a Gargarism of the Decoction of Barley, with the Leaves of Plantain, Horse-tail and Strawberries, with which may be mixed a small Quantity of the Tincture of Myrrh and Aloes, with Honey of Roses. If the Putrefaction still increase, let the Parts be touched two or three times a day, with an armed Probe dipped in the following Mixture made hot.

Take of Honey of Roses, one Ounce; Tincture of Myrrh, extracted with White Wine, two Drams; or rectified Spirit of Wine, one Dram; of the Flos Unguenti Ægyptiaci, one Dram; mix them for Use.

It also frequently happens that the Jaws are so locked up, that the Patient cannot without Difficulty receive his Sullenance, nor the Surgeon inspect the Ulcers; for obviating which Inconveniences I have been under a Necessity of thrusting a bit of Stick, covered with a soft Rag, in at the Corner of the Mouth, between the backward Teeth. But if notwithstanding, any Adhesion happen of the Inside of the Cheek to the Gum, occasioning a Stricture, and hindering the Patient in the free opening of his Mouth, or in the Performance of Mastication, such a Stricture is carefully to be divided.

It is not unusual in raising a Salivation or during the Course of it, especially where there are some rotten Teeth, for a Blood-Vessel or some small Artery to burst open, by reason of the stronger Pulsation than ordinary at such times, the Circulation being somewhat impeded by the Fluxion of Humor and Tumefaction of the Parts, and consequently the Vibration of the Coats of the Artery stronger than at another Time; or this Misfortune may proceed from the Erosion of the Coats of the Vessel by the caustic Salts; whence great Hemorrhages have ensued. At these times a little Pellet of Lint covered over with the fine Powder of Crude Alum, or of Vitriol, or dipped in and expressed from the Aqua Styptica Regalis, and thrust close down into the Cavity, stops the Effusion, being held tight with the Finger for a little while; or if the Situation will admit, a Compress dipt in Oxycrate with the White of an Egg, and the Jaws close shut may be sufficient. *Wifeman* recommends an Egg boiled hard, and held between the Teeth, provided the bleeding Vessel can be compressed by it. I once met with a Flux of this Nature so very impetuous, that I found it the safest way to clap a red hot Steel Probe into the Socket of a rotten Tooth which had been some time before extracted, whence the Blood spouted out, and thus searing the Vessel restrained the Flux. The like Accident sometimes happens at the Separation of the Sloughs on the Sides of the

Cheeks; but here a little Oxycrate held in the Mouth will be sufficient; or where the Bleeding is inconsiderable, it may be suffered to run off with the Lymph, which is only streaked or discoloured with it, perhaps three or four Days, without any other Detriment. If it should last longer, discharging in any considerable Quantity, to the weakening of the Patient, some restraining Liquor, such as the Decoction of Oak-bark, or a strong Infusion of the Leaves of red Roses, unripe Galls, Pomegranate Bark, and Balaustine Flowers in Forge Water, acidulated with Spirit of Vitriol, or the like, may be held in the Mouth and spit out again as often as there is Occasion.

We have already taken Notice of the Diarrhæa, and directed how it may be repressed; but if upon renewing the mercurial Medicine either inwardly or outwardly, notwithstanding all Endeavours, because of some Idiosyncrasy, in the Patient, it will fly to the intestinal Glands, the Discharge may be permitted to proceed that way, if the Strength of the Patient permits, and the Symptoms are not too pressing, and by this way have I known the venereal Venom entirely removed; only taking Care to sheath the Intestines, which are deprived of the Mucus, by frequently injecting as a Clyster some good Flesh Broth, or the Broth of a Sheep's Head, or of the Entrails of a Capon, in which dissolve the Whites of new laid Eggs. These not sufficing you must proceed to greater Anodynes, and even to Opiates themselves. The contrary to this Accident is an over Costiveness, which seldom happens, so as to hinder the Salivation in comparison of the Looseness and Bloody Flux. If the Body be hot and dry, and the Patient spits but little, although his Chaps be much inflamed and sore, if he has been without a Stool for some Days past, it may be proper to throw up a laxative or emollient Clyster, such as warm Milk, with Sugar and Oil; or if the intestinal Fibres are very sluggish, a little common Salt may be put in; also a Suppository of the Species of Hiera Picra, Sal Gem, and Honey, boiled and made up in a proper Size; which emptying his Bowels, and cooling his Body, may probably dispose him to a freer spitting. Now also a greater Liberty may be granted him in his Liquors, of which, for the better diluting of his Blood, let him drink freely; as of Small Beer warmed with a Toast, Barley-water, a small Sack-whey or Posset Drink; also by way of Diet, Water-gruel, Oatmeal Caudle, small Chicken or Veal Broth, sometimes allowing him a roasted Pippin, if his Mouth will suffer it, or a few stew'd Prunes, with such other opening, cooling and diluting Liquids, as are forbidden those who are subject to the Diarrhæa.

There are two other supervenient Accidents which sometimes perplex a mercurial Ptyalism, and endanger the Patient's Life, I mean the too sudden Rise of the Salivation, as it were all at once, by which he may be choked or strangled; and its Continuance, after the Time of its expected Declension, by which the nutritious Juices being thus constantly drained away, an Atrophy or Consumption must necessarily ensue.

The best Way to prevent the former is to begin with the lesser Doses, and when you find the Humors tending upwards, to proceed warily, intermitting the Repetition of the Medicine a Day, two, or three as there may seem Cause. But if by any unforeseen Accident the Fauces should suddenly inflame and tumefy, the Patient is brought into apparent Danger, and Derivation and Revulsion must be immediately attempted; as of sharp Clysters prepared of the common Decoction for Clysters, in which are to be dissolved Confectio Hamech, Species Hiere Picre, Sal Gem, or a small Quantity of the Pulp of Coloquintida tied up in a Rag may be boiled with the other Ingredients. Also some cathartic Medicine may be taken by the Mouth when it can be swallowed. Bleeding under the Tongue, in the Arms, and Cupping with Scarification on the top of the Shoulders, sharp and large Blisters between the Shoulders and behind the Ears, extending along the Jugulars on each Side of the Neck, may be very beneficial; at the same time some moderate attenuating Injection may be thrown into the Throat with a Syringe, to clear it from any viscous Phlegm, such as the Decoction for the Syrup of Marsh-mallows, with the Syrup of the five Roots, and Lemon Juice; or the Pectoral Decoction, a little sharpened with dulcified Spirit of Nitre, Spirit of Sulphur or Vitriol, adding Syrup of Mulberries, Honey of Roses, and Syrup of Brambles, or the like, taking Care not to use repellant or restraining Gargarisms, which increasing and locking up the Humors in the Glands, would farther hazard a Suffocation. If the Humors are viscous, besides the above Injection, the Patient may drink warm Draughts of the same Decoctions, and where his Lungs are more than ordinarily stuffed with a tough and viscid Phlegm, as is usual in some cold, bulky and asthmatic Persons, he may take a Spoonful of fresh Linseed Oil drawn without Fire, if his Stomach can bear it, with a like Proportion of simple Oxymel; or Oxymel of Squills may be taken betweenwhales in a Draught



of the pectoral Decoction; which is an excellent Promoter of Expectoration.

Purging Clysters and Cathartics are, also, to be repeated at proper Intervals, when the Spitting holds longer than it should; by which the Patient's Strength is daily impaired, and a hectic Indisposition contracted. But here the sharper Purgatives are not so proper, the Humours being more gently carried off downwards, or moved that Way at repeated Distances. Diuretics are here, also, requisite, to divert the ferrous Humours by the Glands of the Kidneys, from those of the Mouth: For this Effect the Salt of Tartar is excellent; after which, in order to fix the Mercurial Particles, and restrain the farther Colliquation, Sulphur is esteemed one of the best Remedies. Wherefore let half a Dram or a Dram of the Flowers of Sulphur, or from a Scruple to half a Dram of its Magistery, called Lac Sulphuris, with a little Conserve of Roses, be administered two or three times a Day; or a little of the following Composition.

Take of the Conserve of red Roses, and Quinces, each half an Ounce; Milk of Sulphur, two Drams; Cinnamon Bark, Japan Earth, and red Coral, all prepared, each a Dram; Leaves of Gold, twelve; Syrup of Myrtle, enough to make them into an Electuary.

Let the Patient's Drink be a chalybeated Tincture of Roses, gratefully sharpened with Spirit of Vitriol, or a small Lime-Water. Mean while, let his old Stockings, Drawers, Shirt, Muffler, Cap, and Sheets, with whatever he had on during the time of the Uction, and in his Spitting Course, be changed for others very well aired before they are put on. If the Patient be already in a hectic State, Asses Milk and stercoraceous Powders are the fittest Medicines; which may be ordered for him in the following Manner:

Take of the Conserve of red Roses, an Ounce; prepared Crabs Eyes, prepared Pearls, and prepared red Coral, each a Dram; of the Species Diatragacanthi frigidi, a Dram and half; Syrup of Marsh-mallows, enough to make them into an Electuary; of which take about the Size of a Nutmeg, early in the Morning; drinking afterwards half a Pint of new-milked Asses-Milk, and sleeping after it an Hour. Let the Dose be repeated at four in the Afternoon, with the same Quantity of Asses-Milk.

But if there be any febrile Paroxysm, the Bark must be prescribed, which, by its specific Property, will not only take off the Fits, but by its manifest Stypticity, invigorate also the languid Condition of the Blood, and so put a Check to the Salivation.

If a Dropsy happen to ensue, from the broken Texture of the Blood, accompanied with anasarcaous Swellings of the Feet, Legs and Thighs, and sometimes, also, an Ascites of the Abdomen, the Indications and Remedies are the same as in other watery Tumours.

If a Palsy should be the Consequence, such inciding, volatile, and warm invigorating Medicines, as may open the obstructed Tubes, and restore the nervous Fluid to be carried on in its accustomed Channels, together with such local or topical Application, as may excite the Spirits, and give a new Tensility to the Nerves themselves, are most effectual. *Turner's Syphilis*.

#### A CONSUMPTION FROM A SALIVATION.

Salivation is either natural, or procured by Art; and both of them is a plentiful Separation of the nutritious Juice by the Glands which supply the Spittle; upon which Secretion and Expence of the nutritious Juice, after a long Course of Salivation, the Blood becomes sharp and grows hot, and the muscular Parts being deprived of their due Nourishment, fall into an Atrophy, or Consumption.

A natural Salivation, or Spitting, for the most Part happens to those that have the Scurvy, and that because the Blood, by reason of its Acrimony, is not able to assimilate the new Chyle, and reduce it to its own Nature, and therefore as it circulates continually, throws it off by the Glands, which supply the Spittle. From whence it comes to pass, that even silly Women know, that Spitting too much inclines Men to a Consumption; for which Reason they do well to prescribe the swallowing of the Spittle to prevent a Consumption. Whereby not only the Progress of the Salivation is hindered, (for Spitting does by a certain continual Drawing, as it were, suck the Glands, which afford the Spittle, and put them upon a new Separation of it) but also the Chyle, which is separated by the salivatory Ducts to no purpose, is restored to Nature, to make up the Loss which the Mass of Blood sustains.

It is, also, as certainly true, that every Salivation procured by Art, that is, raised, with Mercurial Medicines, (if it continues long) brings on a hectic and consumptive Disposition.

In this Case (the Salivation being ended) the Patient must be put into a Milk Diet for a long time, by which the Sharpness of the Blood may be corrected, and a consumptive Disposition may be prevented. After that he must be sent into an open and benign Air, and be nourished with the plentiful Use of such Food as affords good Juice; and besides all this, (if it be necessary) he must drink the chalybeate Waters.

I met with a very remarkable Instance of this kind of Consumption in the Daughter of Mr. *Daulton*, an Apothecary, who, from a Salivation that was raised with Mercury to cure the King's Evil, fell, as soon as ever the Salivation was ended, into a fatal Consumption; and by reason of the great Expence of the Humours caused by her Spitting, she could never be restored, either by the Help of the Air, or by a Milk Diet, or any other Art; but being gradually wasted away with a Consumption, after a Month or two from the End of the Salivation, she died without any Sign of a Consumption of the Lungs. *Morton's Phthisiologia, Lib. 1. Cap. 9.*

SALIUNCA NEAPOLITANA, *frut. Nardus ex Apulia.* Italian Spikenard.

#### SALIX.

The Leaves are entire; the Flower, which is Male, and grows on a separate Plant, is amentaceous, spiked, and consists of a Multitude of Stamina. The Ovary, which is found only on the Female Plant, is furnished with a long Tube, adorned with four Horns, is of a conoidal Figure, and constituted in such a manner as to become a spiked Fruit, containing a Multitude of Capsules resembling Horns, and gaping by Maturity into two Parts. These Capsules are full of many downy Seeds.

*Boerhaave* mentions eighteen Sorts of *Salix*, which are;

1. *Salix*; vulgaris; alba; arborecens. *C. B. P.* 473. *Tourn. Inst.* 559. *Boerb. Ind. A.* 2. 210. *Salix*, *Offic. Ger.* 1203. *Emac.* 1389. *Raii Synop.* 3. 447. *Salix arborea angustifolia*, alba, vulgaris, *Park. Theat.* 1430. *Salix maxima*, fragilis, alba hirsuta, *J. B.* 2. 212. *Raii Hist.* 2. 1419. COMMON WILLOW.

This is the largest of all our Willows, having tough, slender, green Twigs, clothed with long narrow Leaves, green above and whitish underneath, serrated about the Edges, and set on alternately. Early in the Spring come long, slender, loose Catkins, which inclose very small Seed in a white Down. It grows every where in moist Places, and by River-Sides.

The Bark, Leaves, and Juli, are cooling and binding, and useful against all kind of Fluxes and Hemorrhages. The Sap which flows from the wounded Bark, is accounted good for inflamed and bloodshot Eyes. The Ancients used to put the Branches of the Green Willow about the Beds of those who were sick of Fevers, to cool and temperate the Air. *Mil-ler's Bot.*

It grows in watry Places, and by the Sides of Brooks. The Leaves, which are used in Medicine, are refrigerating, drying, and somewhat astringent, tho' its principal Use is in restraining venereal Diseases. Outwardly they are of Service in Hemorrhages from Wounds, or from the Nostrils, and the like Disorders.

The Leaves of the Willow being laid in Water, and the same placed in a Room where the sick Person lies, are comfortable and refreshing in an extraordinary manner. They are, also, very grateful Food to Cattle. A Decoction of the Leaves is very proper in an Hæmoptoe; and a Clyster is prepared of the same for a Dysentery. The Leaves, externally used, are of Service in Baths for the Feet in order to procure Sleep, and cool the Heat of Fevers. The Bark of the Tree has the same Virtues; and besides, the Ashes thereof, as *Dioscorides* says, are effectual for extirpating Warts and Corns. *Hist. Plant. Ascript. Boerhaave.*

2. *Salix*; vulgaris; nigricans; folio non serrato. *C. B. P.* 473.

3. *Salix*; vulgaris; rubens. *C. B. P.* 473. *Tourn. Inst.* 590. *Boerb. Ind. A.* 2. 210. *Salix rubens*, *Offic.* *Salix angustifolia purpurea seu nigra*, *Park. Theat.* 1430. *Salix rubra minime fragilis, folio longo angusto*, *J. B.* 1. 215. *Raii Hist.* 2. 1421. COMMON RED WILLOW.

It grows in watry Places, and the Leaves and Bark, which are the Parts used in Medicine, have the same Virtues with the common Willow.

4. *Salix*; lutea; sativa; folio crenato. *C. B. P.* 473.

5. *Salix*; folio amygdalino, utrimque virente, aurito. *C. B. P.* 473. *Boerb. Ind. A.* 2. 210. *Tourn. Inst.* 591. *Salix nigra*, *Offic.* *Salix Spontaneo Amygdalino folio, fragilis auriculata*, *J. B.* 1. 214. *Salix viminalis nigra*, *Park. Theat.*



1430. *Salix folio splendente auriculato flexilis*, Raii Hist. 2. 1420. Synop. 3. 448. SHINING WILLOW, or FRENCH WILLOW.

It grows in Plantations among other Willows, but I find no peculiar Virtues ascribed to it.

6. *Salix*; oblongo, acuto, incano, folio. *C. B. P.* 474.

7. *Salix*; folio longo, angusto, acuto, leviter serrato, supra viridi, infra albescens; viminibus luteis.

8. *Salix*; Platyphyllos; Leucophlaeos; Dalechampii. *Lugd.* 276.

9. *Salix*; foliis longissimis, angustissimis, supra atroviridibus, infra incanis, margine crispo.

10. *Salix*; folio longo, utrimque viridi, acuto, serrato.

11. *Salix*; montana; major; foliis Laurinis. *H. R. Par.*

12. *Salix*; latifolia; rotunda. *C. B. P.* 474.

13. *Salix*; folio ex rotunditate acuminato. *C. B. P.* 474.

14. *Salix*; humilis; capitulo squamoso. *C. B. P.* 474. *Salix*, *Helice Theophrasti*. *Lugd.* 277.

15. *Salix*; folio longo, non auriculato; viminea rubra. *Cat. Cantabrig.*

16. *Salix*; pumila; foliis utrimque candicantibus & lanuginosis. *C. B. P.* 474.

17. *Salix*; pumila; brevi angustoque folio, incano. *C. B. P.* 474.

18. *Salix*; minima; flore eleganti luteo. *An Salix, pumila, montana, folio rotundo*. Raii Hist. 1423? *Boerb. Ind. Alt. Plant. Vol. 2. p. 210.*

Besides the foregoing Species of *Salix*, *Dale* mentions the following.

*Salix, Helice*. Offic. *Salix, Helice Theophrasti*, Park. Theat.

1435. *Salix Rosea Anglica*, Ger. 1204. Emac. 1390. ROSE WILLOW.

It grows by the Sides of Brooks, and is esteemed only a *Lusus Naturæ*.

SALLENA. A Species of Salt-Petre. *Rulandus*.

SALMERINUS, or SALMERO. A Fish very like the Salmon, but smaller; it is found in Rivers and Lakes. This Fish has something of the Trout, and is at least of as good a Taste as it and the common Salmon. It is tender, delicious and short, and not at all viscous; but on the contrary, so easy of Digestion, that some Physicians allow the Sick to eat it. It corrupts very soon, if not salted, and produces very near the same Effect as the Salmon.

Some pretend this Fish does not at all differ from the common Salmon, and that in time it grows as big as the other. However, *Johnston* makes a different Species of it; and we may easily apprehend by the Description this Author has given us of its Form, that there is some small Difference between it and the Salmon. Besides, *Gesner* says, he once consulted a very experienced Fisherman and Man of Probity upon this Subject, who assured him, this Fish would never grow so big as a common Salmon, tho' it were to continue many Years in the River. *Lemery on Foods*.

SALMO. The Salmon.

The Salmon is a Fish of an excellent Taste, and covered with numerous small Scales, marbled with red or yellow Spots. It is usually two or three Foot long, and very thick, tho' there are some six Foot long; some have weighed from twenty four to thirty six Pound. It has been said that this Fish will not live but in troubled and muddy Waters; but small Fishes have been found in its Belly; nor is it probable that so large and strong a Fish should live only upon troubled Water, and his numerous Teeth seem designed for solid Food.

Tho' the Salmon be a Sea-Fish, it usually comes up the Rivers in the Beginning of Spring, where it is observed that he fattens. But when he has tarried above one Year in a River, he grows pale, dry, lean, and ill-tasted. This Fish lives several Years, and may be kept a long Time out of the Water before it dies.

The best Salmon is well fed, large, of a middling Age, tender, short, reddish, and taken in fine clear and running Water. It is eat either fresh or salted; the first is much more agreeable to the Taste, but soon corrupts. It is tender, short and savoury, and abounds with volatile Salt, and oily and balsamic Principles, which render it nourishing, strengthening and restorative; it also promotes Urine, is pectoral and restorative; but if eat immoderately, being very fat, it causes Reachings and Indigestions; and if too old, it is dry, hard, and heavy upon the Stomach. *Lemery on Foods*.

SALOME. *Σαλωμ*. The Name of a Plaster described by *Galen*, de Comp. M. p. G. Lib. 2. C. 7.

SALOMONIS SIGILLUM. Solomon's Seal. The same as the POLYGONATUM.

SALPA. Stock-Fish.

This is a Sea-Fish pretty large, long, and resembling a common Cod. It feeds upon Sea-ware, and Excrements, but is not much esteemed for Food, because its Flesh is hard, and has no great Taste. They are dried till they are as hard

as Wood, so that before they are prepared, they must be beaten in order to make them tender. They are said to be of an aperient and resolvent Nature. *Lemery des Drogues*.

SALPETRA. Nitre.

SALPINGO-PHARYNGÆUS, according to *Valsalva* and *Douglas*, is one of the Origins of the Muscle of the Pharynx. It arises from the Extremity of the bony Part of the *Tuba Eustachiana*.

SALPINGO-STAPHILINUS MUSCULUS. A Muscle of the Uvula, thus described by *Douglas*. It arises fleshy from the bony Part of the Tube of the Ear, and is inserted into the Basis of the Uvula, where it joins Fibres with its Partner Muscle on the other Side.

Its Use is to draw the Uvula upwards and backwards.

SALSAMENTUM. The same as TARICHIOS, which see.

SALSAPARILLA. The same as SARSAPARILLA.

SALSATURA. In the Preparation of the Philosophers Stone, is Dealbation.

SALSEDO. Saltnefs.

SALSEDO MUCRUM. Salt Petre, that is, Nitre.

SALSUGO. Pickle, or Brine.

SALTABRI. The same as *Sal Alembrot*. See ALEMBROT and SAL.

SALVATELLA. A Vein in the Back of the Hand, the opening of which some Physicians have fancied to be of singular Use in Melancholly. It is the Vein which comes from the little Finger, and that next to it; or, according to others, that which proceeds from betwixt the Thumb and Fore-Finger.

SALVIA.

The Characters are;

It agrees almost in every Character with *Scalaria*, or Clary. The Galea is sulcated, or fornicated, the Beard trifid, the middle Segment thereof being almost excavated. The Stamina of the Flowers, by their Inflexion, represent the Fabric of the Os Hyoides.

*Boerhaave* mentions twenty Species of *Salvia*, which are;

1. *Salvia*; major; an *Sphacelus Theophrasti*? *C. B. P.* 237. *Tourn. Inst.* 180. *Boerb. Ind. A.* 166. *Salvia hortensis major*, Offic. *Salvia major*, Ger. 623. Emac. 764. *Salvia major vulgaris*, Park. Theat. 49. *Salvia latifolia*, J. B. 3. 304. Raii Hist. 1. 509. COMMON SAGE.

Sage is a shrubby Plant that grows in every Garden, and is well known to have long, rough and wrinkled Leaves, sometimes of a hoary Green, and sometimes of a reddish Purple Colour, of a pretty strong Smell; the Flowers grow on long Stalks, set on Verticillatim in Spikes; they are large and galeated, having the Galea crooked and hollow, and the Labella broad, of a bluish Purple Colour, set in large clammy Calyces, in the Bottom of which grow four round smooth Seeds; it is planted in Gardens, and flowers in May; the Leaves and Flowers are used. *Miller's Bot. Off.*

It grows in Gardens, and flowers in June, and the Parts in Use are the Leaves and Flowers. Sage is diuretic; it provokes the Menfes, when retained through Thickness, and moderates their Excess; it is also serviceable in Palsies, Vertigos, Tremblings and Catarrhs; outwardly it absterges Aphthæ in the Mouth. *Dale from Schroder*.

Sage, which is produced almost in every Garden, is an excellent Cephalic, and was always highly esteemed by the Inhabitants of the Eastern Nations, who at present prefer its dried Leaves to Tea. In Consequence of the subtil, vaporous, and sedative Oil it contains, a Decoction or rather Infusion of it by Way of Tea, is highly efficacious in spasmodic Disorders, in Contractions of the Members, and chronical Epilepsies. Baths of it prepared with an Addition of nervous Substances, such as Iron-wort, Origanum, and Mother of Thyme, are very serviceable in curing paralytic Members, and restoring the Tone of the Uterus. In order to allay Inflammations of the Fauces, and other Disorders of the Teeth and Mouth, Surgeons order a Decoction of Sage to be used as a Gargarism. *Hoffman. de Præstant. Remed. Domest.*

See BULO.

2. *Salvia*; major; an *Sphacelus Theophrasti*; floribus candidis? *C. B. P.* 237.

3. *Salvia*; perelegans; tricolor; argentea; Belgarum. *H. R. Par.*

4. *Salvia*; major; foliis ex viridi & luteo variegatis. *H. R. Par.*

5. *Salvia*; major; foliis ex viridi & albo variegatis.

6. *Salvia*; latifolia; serrata. *C. B. P.* 237. *Prod.* 113.

7. *Salvia*; major; arborecens; foliis vieticis, laceris, Fimbria aurea donatis.

8. *Salvia*; Cretica; non pomifera. *Clus. H.* 343.

9. *Salvia*; folio lato, amplo, subrotundo.

10. *Salvia*; minor; aurita & non aurita, *C. B. P.* 237. *Tourn. Inst.* 181. *Boerb. Ind. A.* 166. *Salvia hortensis minor*, Offic. *Salvia minor*, Ger. 623. Emac. 764. Raii Hist. 1.



510. *Salvia minor auriculata*, J. B. 3. 305. *Salvia minor five pinnata*, Park. Theat. 50. SAGE OF VIRTUE.

This Sage is smaller than the common Sort, having lesser, narrower and smoother Leaves, of a whitish hoary green Colour, with frequently two small Pieces or Ears growing on them next the Stalk, which in some Plants are wanting, and in others but on one Side; it is of a milder Scent than the common, and has rather smaller Flowers, but much of a Colour, flowering at the same Time, and is also planted in Gardens.

The Virtues of both this and the common Sort are much the same; the common is used more in the Kitchen; they are Cephalic, and good for all Diseases of the Head and Nerves, as the Palsy, Convulsions, &c. They are likewise diuretic, and good for uterine Obstructions, and are much used in Fevers of all Sorts, in Tea or Posset-drink. *Miller's Bot. Off.*

11. *Salvia*; *angustifolia*; *ferrata*. C. B. P. 237.

12. *Salvia*; *Orientalis*; *latifolia*; *Abfinthium redolens*; *flore carneo magno*.

13. *Salvia*; *Orientalis*; *latifolia*; *hirsutissima*; *viscosa pinnata*; *flore & calice purpureis*; *inodora*.

14. *Salvia*; *Africana*; *frutescens*; *folio subrotundo*, *glauco*; *flore aureo*, *magno*. H. A. 2. 183.

16. *Salvia*; *baccifera*. C. B. P. 237.

17. *Salvia*; *bacciferae similis*; *sed foliis magis undulatis*.

18. *Salvia*; *Cretica*; *frutescens*; *pomifera*; *foliis longioribus*, *incanis*, *crispis*. T. C. 10. T. Voy. 1. 77.

19. *Salvia*; *Hispanica*; *folio Lavandulae*. T. 181.

20. *Salvia*; *Abfinthium redolens*. J. B. 3. 307. *Boerb. Ind. Alt. Plant. Vol.*

The first Species of *Salvia* is called *Sphacelus Theophrasti*, because its Leaves bruised and applied to a gangrenous Place, cure a Gangrene, and prevent a Sphacelus. Some of the Species are said to be pomiferous; the Occasion why they are so called is, that in hot Countries a certain Insect half penetrates the Leaf, principally of those Plants which have wrinkled Leaves, and there lays its Seed, whence in the following Year is produced what we name a Gall. These Species being transported hither, are furnished with those Galls for the first Year, which disappear in the next, because we have no such Insects in these Countries.

*Salvia* is so called from *Salvus*, sound, healthy, because no Plant has a greater Reputation for Healthfulness and Wholesomeness, whence the Question in the old Verse,

*Cur moriatur Homo cui Salvia crescit in Horto?*

Why dies the Man whose Garden Sage affords?

All the Species have a very fragrant Smell beyond all other Plants, and if snelled to for a considerable Time, cause a Sort of Ebriety, and at length a Vertigo; for examining this Plant upon an empty Stomach, I found myself almost drunk with the Smell thereof, and when I had taken some of the Flowers, I felt a Heat, with an Accession of Strength from them. The Leaves infused in Water blacken it like Tea, and Ink may be made with the same as well as with Galls. Drank after this manner, it is astringent, stimulates the Fluids, and corroborates and dries the Fibres and Bones; whence I conclude it to be a Strengtheners, Heater, and Raiser of the Spirits. It is justly, therefore, by *Dioscorides* esteemed a most effectual Sudorific, Cardiac and Cephalic, and has given Occasion for the Verse in the *Schola Salernitana* above cited. The Leaves infused in Wine loosen loose Teeth and Gums, and are good for the Scurvy, and by their balsamic Virtue corroborate the Parts. It is an excellent Plant for all Diseases of the Head proceeding from Weakness of the Stomach, and is of Service in the Palsy, Lethargy, Apoplexy, Epilepsy, Podagra, Arthritis, Vertigo, Leucophlegmatia, and Chlorosis or Cachexy of Virgins. It is subject, however, to one very great Inconvenience, which is, that it harbours Toads under its Roots; the Way to avoid which is to plant near it Rue, which these Animals cannot endure. Hence the rhyming Verse,

*Salvia cum Ruta faciunt tibi Pocula tuta.*

Sage indeed was by the Ancients justly esteemed alexipharmic, sudorific, cardiac, and especially cephalic, but it was only in cold Diseases, where Phlegm abounded. The distilled Water, and the Conserve of the Flowers, were usually exhibited as Preservatives against all Sorts of Poison, by their sudorific and strengthening Virtues. Sage is also reckoned to have an antiseptic Virtue, which renders it very serviceable in seasoning Carcases, and therefore of great Use and Esteem in the Seraglio of the Grand Signior; for, first, it defends the Parts from Worms and Insects; secondly, by its astringent Virtue it causes a Constriction of the Parts; and lastly, by its grateful Fragrance resists Corruption. The *Chinese* are said to have so great a Love for it, that when you present them

with some of it, they cannot forbear asking how the *Europeans* can take such Delight in their Tea, when they have so much Sage of their own Growth. Sage corroborates and constricts the solid Parts, and is employed by the Surgeons in restraining Hæmorrhages from Wounds, by Constriction of the Arteries; and the Herb boiled in Wine is very good for a paralytic Limb, being of an aromatic and astringent Quality, attended with somewhat of Austerity. All the Species have the Nature of the *Quercus*, whence they are binding, excite the Spirits, and move the Nerves; hence they are a very good Remedy in a Laxness and Inertness of the Nerves. A Conserve of Sage is very proper for a Weakness of the Stomach in Women, for those of that Sex who have for Years together laboured under an Infirmitas or Debility of the Stomach, are cured by taking half a Dram of the Conserve. *Hist. Plant. ascript. Boerhaave.*

SALVIA AGRESTIS. A Name for the *Scordium*; *alterum*; *five Salvia agrestis*.

SALVIA MONTANA: A Name for the *Sclarea*; *glutinosa*; *floris lutei*, *variegati*, *Barbâ amplâ cavâ*.

SALVIA SYLVESTRIS. A Name for the *Stachys*; *Canariensis*; *frutescens*; *Verbasci folio*.

SALVIA VITÆ. A Name for the *Ruta*; *muraria*. See ADIANTHUM ALBUM.

Besides the foregoing Species of *Salvia*, Dale mentions the following,

*Salvia folio tenuiore*, C. B. P. 237. Tourn. Inst. 181. Raii Hist. 1. 510. *Salvia Indica*, Ger. 623. Emac. 765.

*Salvia minor aurita odoratissima Hispanica*, Park. Theat. 50. *Salvia tenuifolia*, J. B. 3. 306. SPANISH SAGE.

It is cultivated in Gardens, and the Leaves, which are the Part used in Medicine, are endued with the same Virtues as those of the common Sage.

SALZ, SULZ, or SELENIPPUM. Brine.

SAMBACH. A Name for the *Jasminum*; *five Sambach Arabum Alpini*.

SAMBUCUS.

The Characters are;

The Branches are full of a fungous Pith; the Flower is monopetalous, rotated, multifid, as it were rosaceous, and disposed in Umbellas, or Bunches. The Ovary, which penetrates the Bottom of the Flower, becomes a Berry full of Juice, and generally containing three oblong Seeds.

*Boerhaave* mentions eight Species of *Sambucus*, which are;

1. *Sambucus*; *fructu in umbella nigro*. C. B. P. 456. Tourn. Inst. 606. *Boerb. Ind. A. 2. 223. Sambucus Offic.* Ger. 1234. Emac. 1422. Raii Synop. 3. 461. *Sambucus vulgaris*, Park. Theat. 407. J. B. 1. 544. Raii Hist. 2. 1609. COMMON ELDER.

The Elder-Tree is a common Hedge-Tree, whose spreading Branches have a spongy Pith in the Middle. The outside Bark is of an Ash-Colour, under which is another that is green. The Leaves are pinnated, of two or three Pair of Pinnæ, with an odd one at the End, which is larger than the rest: They are oval, sharp-pointed, and serrated about the Edges. The Flowers grow in large flat Umbels. They are small, of one Leaf cut into five Sections, with as many small Stamina, and are succeeded by small, round, deep, purple Berries, full of Purple Juice. The Elder-Tree grows frequently in Hedges, especially in moist Places, and flowers in May, and the Berries are ripe in September. The Bark, Leaves, Flowers, and Berries are used.

The inner green Bark purges thin scrous Humours, and is much used for the Dropsy, the Leaves are only used outwardly, being good for Inflammations, St. Anthony's Fire, and the Piles. The Flowers are helpful for the same, and are frequently put in Fomentations and Cataplasms, for all kinds of Swellings and Tumours, and Pains of the Limbs. Inwardly used they expel the Wind, and help the Colic. The Berries are cordial and useful in hysteric Disorders. They are diuretic, and good for the Dropsy; and are frequently put into Gargarisms for sore Mouths and Throats.

On the Trunk of this Tree frequently grows a fungous Excrecence, wrinkled and turned up like an Ear, whitish on the Outside and black within, with several little Veins. These are called Jews Ears, or *Auriculæ Judæorum*. They are accounted good for the Swelling and Inflammations of the Tonsils, sore Throats and Quinsies.

Official Preparations of the Elder, are the *Aqua Florum Sambuci*, the *Oleum Sambucinum*, the *Unguentum Sambucinum*, and the *Syrupus Sambuci*. *Miller's Bot. Off.*

Its Leaves have a Taste at first herbaceous and saltish, afterwards bitter. The Fruit is sweetish, and gives a deeper Red to the blue than to the white Paper.

Its Leaves yield, by the Chymical Analysis, beside some acid and alkaline Liquors, some volatile concrete Salt, a great deal of Oil and Earth. Thus it may probably operate by a Sal Ammoniac, loaded with more Acid than ordinary, and joined



joined with a great deal of Oil and Earth. The Salt of the Elder-Berries resembles Alum rather than Sal Ammoniac. It affords only a little urinous Spirit from these Parts, but a great deal of Acid, Oil and Earth. *J. Baubin* and *Mr. Ray* took its Flowers to be pentapetalous; but it is monopetalous.

*Hippocrates* says it purges both by Urine and Stool. *Dioscorides*, also, says, that an Infusion of the Roots and Leaves in Wine evacuates Serosities, and affords Relief in hydropic Cases. He, also, commends Elder Wine, especially that of the Berries, for the Biting of Vipers, and in hysteric Cases; and adds, that it allwages Inflammations and the Gout, cures Burns, Ulcers, and the Bitings of mad Dogs. *Tragus* and *Dodonæus* prescribe either the Juice of the middle and green Bark, or an Infusion of them in Wine or Milk, to evacuate Bile and Serosities. *J. Baubin* gives an Ounce and an half of Elder-Bark Water to be drank thrice a Day, in the Morning, Noon, and at Night, in hydropical Cases. Fresh (not dried) Elder-Flowers fried with Eggs, are said to purge well enough.

Infuse dried Elder-Flowers in Whey, and take a Glass of it Morning and Evening for the Small-Pox, and *St. Anthony's* Fire; bathing the Face, in the mean time, with two Parts of Elder infused in one Part of Spirit of Wine.

A Conserve and a Syrup is made with these Flowers. They boil them gently in Vinegar and Honey for Clysters. *Camerarius* prescribes the Decoction of the young Shoots of Elder, with a little Saffron, to provoke the Terms. They are, also, used in a Conserve and Syrup, or Powder, to keep the Belly open, and purify the Blood. A Rob, Extract, Spirit, Wine, Vinegar, Syrup, and Oil, is made of the Berries of Elder. To make the Rob, take one Pound of the Juice, half a Pound of Sugar, thicken them over the Fire. *Quercetan's* Receipt of the Extract is, make a Tincture of dried Elder-Berries, with a sufficient Quantity of Spirit of Wine, add a little Spirit of Sulphur; let them digest in a close-stopped Bottle five or six Days; filtrate the Tincture, drink half a Spoonful or a Spoonful, which is very good in the hysteric Passion; or draw off the Spirit of Wine by Distillation, and the Extract will remain in the Bottom of the Cucurbit; the Dose is from a Scruple to a Dram, in the same Disease and the Looseness. The burning Spirit of Elder-Berries is very sudorific, as also the Juice of the Berries, which are easily preserved either with Oil, or by mixing a third Part of good Spirit of Wine. That which they call Elder-Wine is this Juice kept a Year: Some boil it with Sugar to the Consistence of a Syrup. The Stones of the Berries, by Expression, yield an Oil which eases the Pain of the Gout. An Oil is, also, made for this Distemper by Dissolution of its Leaves. They bruise the Ribs of its Leaves, put them into a Stone Pot, and bury it pretty deep, after having luted it well with Plaster. At the End of the Year a Sort of Oil subsides to the Bottom of the Pot, which is very lenifying. The Stones given from three Drams to half an Ounce, in Powder, are purgative, or else an Emulsion of about an Ounce may be drawn from them; being macerated in white Wine, they are scarcely purgative. The Leaves boiled in thick Wine are very resolvent; they abate the Swelling of the Legs of hydropic Persons, by placing them so as to receive the Vapours or Steam from a Bath of it, or by frequent fomenting and applying the Faces as a Cataplasm to them. The Leaves and Flowers of Tansey may be mixed with it.

*Matthioli* prescribes an excellent Ointment for Burnings: Take Oil of Olive, two Pound; middle Bark of Elder confused, one Pound; boil them together, (adding now and then Elder Water) till the Bark be hard and black. Strain and boil it up to an Ointment, with four Ounces of new Wax, and as much of the Juice of young Elder Shoots, to keep it from burning. Before it is removed from the Fire, add Turpentine, and Male Frankincense, of each four Ounces; two hard Yolk of Eggs; keep it in a Stone Pot for Use. Or boil the middle Bark of Elder-Branches, confused in Oil of Olive or Nuts; bring it up to the Consistence of an Ointment with Bees-Wax, and Yolks of Eggs; keep it in a Bason with fresh Water. This is very good for the Gout, Inflammation of the Piles and Burnings. Apply some Honey, add afterwards some Nut-Oil boiled with Elder. This gives great Relief to Burnings by Gunpowder. Wash Ulcers produced by Burnings with a Decoction of Elder and Ash-Bark. *Zwelfer* prescribes an Ointment for Burnings thus:

Take of fresh Butter two Pounds; Elder-Oil, and green Juniper Berries bruised, of each a Pound; fresh Elder Flowers, six Ounces; white Roses, four Ounces; macerate all these together some Days, then boil them a little, and mix them up with five Yolks of hard Eggs. Apply this Ointment to the Burning with a Feather, and cover it with brown Paper. *Martyn's Tournefort*.

*Martin Blockwitz* has written a whole Book of the Vir-

tues and Use of Elder, under the Title of *Anatomia Sambuci*, "The Anatomy of the Elder-Tree."

The inner Bark (the middle of the Stem) evacuates serous Humours, whence it is of Service in Dropsies. The Buds, or tender Leaves, boiled in Wine, or eaten in Sallads, are not so effectual, but fittest for weak Constitutions. The same pulverized, and taken in Pease-Broth, are good for Costiveness. The inner Bark applied to Ambustions, is said to be effectual to extinguish the igneous Heat. *Dioscorides* recommends a Cataplasm prepared of the fresh and tender Leaves, with Polenta, for Combuitions. *Aëtiarius* also highly commends the *Sambucus* for a recent Combuition. The Flowers are discutient, emollient, resolvent, sudorific, and anodyne. Their principal internal Use is in preventing or curing an Erysipelas; and externally, they are of Service, also, in an Erysipelas, Combuitions and the Colic. Our Domesticks, says *J. Baubin*, take the Bunches of Flowers, and fry them in a Pancake, and make thereof a grateful and wholesome Food. They may as well be mixed with other Meats, or fried with Eggs, being gently loosening of the Belly. The Flowers dried lose their purgative Quality with their Humidity; but retain their digestive and attenuating Virtue. Vinegar, in which the Flowers have been macerated, is grateful to the Stomach, excites an Appetite, and cuts and attenuates gross and crude Humours. The Berries are alexipharmic and sudorific. The Spirit drawn from the Berries is one of the principal Sudorifics, and also a very noble antifebrile Medicine. And the Wine prepared of the Juice, with white or *Rhenish* Wine, is of admirable Efficacy in the Dropsy. *Camerarius* writes, that the Juice of the Berries, mix'd with Cock-Broth, in which a good Quantity of Parsley-Root has been boiled, and expressed, is very good for hydropical Persons. The Stones, or Seeds of Elder are absterfice, and purge violently both by Stool and Vomit. The Decoction of the middle Bark of Elder, or Dwarf-Elder, with Syrup of Poppies, are an effectual Sudorific: For Narcotics added to Diuretics or Diaphoretics are the more provocative to Sweat, as appears from the Mixture of Opium in Theriaca Andromachi, and Mithridate. For Inflations of the Feet, take a sufficient Quantity of Leaves of Elder, and boil them in Oil and Salt, and therewith foment the Parts.

For the Arthritis, take Leaves of Elder, and put them in a glazed Pot, so as that they may fill it without being wrinkled; press them very well and often, then put a Cover upon them, and bury them a Year under the Earth. After which you will find a Crust above, and Oil below, than which Oil nothing is of greater Efficacy, as it has been often tried. A Conserve of the Flowers has the same Virtue.

The *Sambucus* is less hurtful to the Stomach than the *Ebulus*, and the Leaves have not so strong a Smell, nor so much of a cathartic Force as those of the other. The *Germans* frequently use the inspissated Juice of the Berries as a Sudorific, and give it to their Children with Bread; and sometimes exhibit it with good Success to those who are inclined to a Dropsy. The Berries are boiled in Water, and strained; and then boiled again to the Consistence of a Sapa, or Rob.

A Plum-Tree grafted on an Elder-Tree, bears purging Fruit, according to *Camerarius*, who says he has tried it, tho' he could not easily comprehend the Reason. I think neither of them probable, says *Ray*, and cannot comprehend either the Infition of a Plum-Tree into an Elder-Tree; nor, if this be granted, how it should bear a Fruit of a purgative Quality.

For an Erysipelas, we have a Fomentation much in Use, which is prepared of two Parts of Elder-Water, and one Part Spirit of Wine. This Practice is grounded on Reason and Experience: For the Spirit of Wine, by the Subtily and Activity of its Parts, is disposed to reduce the ruffled and distorted Tubes and Fibres of the Skin into their natural Order; and besides, the Parts affected with the Erysipelas are often eased and relieved by it in a remarkable manner. This is the common Remedy in *London*; but I have often in this Case, says *Dr. Hulse*, successfully made use of Water of Elder-Flowers, mixed and shaken together with Oil of Elder, to which I have sometimes added Spirit of Elder-Berries. I have frequently cured this Disorder with Oil of Elder and Canary Wine, mixed and shaken together.

For a quotidian Fever, take of the Bark of the Root of Elder, one Ounce; of Alarabacca, three Ounces, with a Dram and half of Cinnamon; boil them in Milk, and give it in the Beginning of the Paroxysm. It provokes to Stool, and excites Vomiting at one and the same time.

For Burns, or Combuitions, take of the green middle Rind, or Bark of Elder, a Quantity at Discretion, and boil it in Oil till it be withered, and add thereto a little Wax, in order to render it a lucid Ointment. This, says *Chefneau*, I have several times tryed with Success. *Rail H. P.*

The Root rasped and infused in Wine, to the Quantity of



an Ounce, purges Water in great Abundance. The Juice of the middle Rind of Elder, expressed in a glazed Mortar, and exhibited from a Dram to half an Ounce, is the best of Hydragogues, for a Person who is just suffocated with a Dropsy, provided the Viscera be sound, for it always cures in a few Days. It dissolves the Humours to such a Degree, that the Body runs with Streams of Water in every Part, and the Patient faints away on Occasion of so great and sudden an Evacuation. The Bark of the Root is esteemed much the best for Use. The Leaves and Tops are commended by *Dioscorides* in the hysteric Passion, Inflammations, Combuſtions and Gout. The same Author exhibited the Juice of the Middle Rind, infused in Milk or Wine, to those who laboured under the Pestilence, in order to provoke Sweat. The bruised Leaves are very effectual in discussing all scirrhus and inflammatory Tumors, in easing the Pain of the Gout, and dissipating aqueous Swellings, whence they are of Service in an aqueous Hernia. The Flowers are very salutary, and being infused in the manner of Tea, are very proper in all hot, feverish, variolous and morbillous Distempers. Their Decoction is very good to increase Milk in Women's Breasts; and outwardly they are of Service in an Erysipelas, Phlegmon, Head-ach, and Want of Sleep, being applied in a dry or humid Form, by their demulcent Virtue procuring a kindly and quiet Sleep. Of the Flowers are prepared a Conserve and Syrup, of Use in Clysters. The Tops are good to provoke the Menſes; and the Flowers are proper in all cancerous and scirrhus Diseases, the Pain of the Cholic, and a quartan Ague. Of the Berries is prepared a Rob, which is justly accounted of universal Use in chronic as well as acute Disorders, where is required a Dissolution, or an Evacuation by Stool, Urine or Sweat, according to the different Determination or Tendency of the Humours. I never found any Remedy which gave so much Relief under a Cancer as these Flowers. There was an old Man, who lived to above one hundred and twenty-five Years, who regarded this Rob of Elder as his Arcanum, and happily survived many contagious Seasons, by using no other Remedy, but taking every Day some of this Rob, to which only, and to no other Thing, he imputed his Health and long Life. The Extract is very good in Hysterics, and the Berries are of Service in all kinds of Dysenteries and Diarrhæas; and the Oil is very good in the Gout. The Leaves, or middle Bark, made into an Ointment with Oil, are useful in the Hæmorrhoids, Gout and Combuſtions; and half an Ounce of the bruised Seeds mitigate Pains of the Belly, and destroy Worms. The outer Bark is astringent; and the Pith dried and torrefy'd is of Service in humid Ulcers. *Hist. Plant. Aſcript. Boerhaave.*

*Bartholine*, in *Differt. de Medic. Dan. Lib. 1.* informs us, that Elder is at once more safe and efficacious than the celebrated Antidotes prepared of Theriaca and Mithridate. The Flowers and Rob of Elder are highly and justly esteemed by the common People; for the former are with great Success externally applied for alleviating all erysipelaceous Swellings, Toothachs and Gouts; as also for softening Abscesses and hard Tumours, produced by coagulated Milk. The Water of these Flowers, in consequence of its anodyne Quality, is of singular Efficacy in all Diseases, whether acute or chronical; but especially in those Disorders where Expulsion is proper, where the Pain is intense, and where there is an Inflammation of the internal Parts. The Rob prepared of Elder-Berries, is, as it were, the Panacea of the Country People, who use it as the best Preservative, and the safest Medicine in the Beginning of Diseases, mixing it either with warm Ale or Elder Flower Water; for it not only promotes the Excretions by Stool and Perspiration, but is also possessed of an anodyne Quality. Some, in order to render this Rob more diaphoretic, add about a Dram of calcined Hartshorn to it. If this Rob is mixed with an equal Quantity of Sugar-Candy, and a due Quantity of Brandy poured upon the Mixture, and kindled after a sufficient Agitation, it affords a Medicine, one Spoonful of which is of singular Service in long protracted Coughs, and before the Paroxysm of intermittent Fevers. The frequent Use of this Rob generally mitigates, and sometimes stops the Impetus of these Fevers, provided the Crudities of the Primæ Viæ have been previously treated with Laxatives and Correctors. The Middle Bark of the Elder Tree, if boil'd in Ale, Water or Wine, powerfully promotes Sweat, Urine, and the Menſes, for which Reason it is highly proper for cachectic Patients. This Bark, when externally applied, removes oedematous and erysipelaceous Swellings, as also Pains and Tumors of all Kinds. *Hoffman, de Præſt. Remed. Doct.*

AQUA FLORUM SAMBUCI. See AQUA.

OLEUM SAMBUCINUM. See OLEUM.

ROB BACCARUM SAMBUCI.

*Rob of Elder Berries.*

Take of the Juice of Elder Berries any Quantity, and let it leisurely be inspissated over a gentle Fire, either by itself, or in Conjunction with a fourth Part of Sugar.

After the same Manner is prepared the Rob of Dwarf Elder, of Juniper and Veronica; unless that in the latter, the Sugar and Juices are required of equal Quantities. After the like Manner others, also, may be prepared.

#### UNGUENTUM SAMBUCINUM.

*Ointment of Elder.*

Take of Elder Leaves gathered in May, ten Handfuls, of the young Shoots growing about the Bottom of the Tree, two Pounds, of the inner Bark of the same, one Pound. After these are all cut small, boil them in twelve Pounds of fresh Butter, over a slow Fire, continually stirring them all the while. Press out the Butter and strain it: to it put the same Quantity of fresh Leaves, Shoots and Bark, and repeat the Process as before, and then press it out again with less Force, so that it might be an Ointment.

This is entirely new, and wonderfully well contrived to preserve all the Virtues of the Elder, as much as such a Form will admit of: The Measure of Boiling is until the Leaves, &c. grow crisp.

2. Sambucus; fructu in umbella viridi. *C. B. P.* 456.

3. Sambucus; racemosa; rubra. *C. B. P.* 456. *Park. Theat.* 407. *Raii Hist.* 2. 1610. *Tourn. Inst.* 606. *Boerb. Ind. A.* 2. 223. *Sambucus montana*, Offic. *Sambucus racemosa acinis rubris*, J. B. 1. 551. *Sambucus racemosa vel Cervina*, Ger. 1234. Emac. 1422. MOUNTAIN ELDER.

This Elder differs not a great deal from the common, in Branches or Leaves; these are pinnated, and rather narrower than those of the common Elder, having five serrated Pinnæ on a Stalk. The chief Difference is in the Flowers, which are yellower, and grow in thicker Clusters, and in the Berries, which are not so deep, but of a reddish Colour. This Elder is seldom to be met with in England, but grows plentifully in Germany, and flowers in May.

It is not much used inwardly, being accounted somewhat Narcotic. It is an Ingredient in the Unguentum Populeon, but being rarely to be had, the common Elder is used in its Stead. *Miller's Bot. Off.*

4. Sambucus, laciniato folio. *C. B. P.* 456.

5. Sambucus; humilis; five Ebulus. *C. B. Pin.* 456. *Raii Hist.* 2. 1611. *Synep.* 3. 461. *Tourn. Inst.* 606. *Boerb. Ind. A.* 2. 223. *Ebulus Chamææte*, Offic. *Ebulus five Sambucus humilis*, Ger. 1238. Emac. 1426. *Park. Theat.* 208. *Ebulus five Sambucus herbacea*, J. B. 1. 546. DWARF-ELDER, or DANEWORT.

This is a much less Plant than the common Elder, seldom growing to be above three or four Foot high, having several long pinnated Leaves, growing two at a Joint; they are longer and narrower than the common Elder, and sharper pointed. The Stalks are square and striated, dying down every Year, and rising again in the Spring; on the Top of these grow Umbels of white Flowers, having frequently a Dash of Purple, each of one small Leaf, divided into five Segments; which are succeeded by round Berries, when ripe, of a deep Purple, or black Colour, and full of a purplish Juice. The Root is thick, and creeping on the Surface of the Earth.

*Dwarf-Elder* is much of the Nature of common Elder, purging ferous watery Humours by Stool, and is therefore good for the Dropsy, and other Distempers arising from a Glut of Serum. It is likewise very serviceable against gouty scorbutic Humours, both given inwardly, and applied outwardly, boiled in a Lixivium. *Miller's Bot. Off.*

The Leaves are a little bitter, and the Fruit is more so. It is stiptic, and does not redden the blue Paper. By the chymical Analysis the Leaves and Tops yield a little acid and urinous Spirit, no concreted volatile Salt, and a good deal of Oil and Earth. The Leaves are emollient and resolving, they are heated under the Fire, and used as a Cataplasm for the Gout, and all Kind of Tumors. The young Shoots and Bark are purgative. They often infuse half an Ounce of its Seeds in a Glass of White Wine; then squeeze them a little, and give the Wine to hydropical Persons to drink, but it purges very gently. It is better to make an Emulsion with six Drums or an Ounce of them, to discuss the dropical Swelling of the Legs, or to cure the Rheumatism, make a Balneum vaporis, with the Leaves of Dwarf-Elder, Tansey, Sage, and such like Plants, or else boil these Leaves in thick Wine to bath the Parts, and apply the Faces to them. The Oil ex-



pressed from the Seed is sweetening and resolving. This Herb is a Succedaneum to Elder. *Martyn's Tournefort.*

The *Ebulus* is supposed to be endued with the same Virtues as the *Sambucus*, but in a superior Degree. The Bark and Seeds are Hydragogues, and therefore of Service in the Dropsy, Gout, and other Diseases proceeding from Serum. A Decoction of the Root and Seeds is celebrated by almost all Botanists for the Evacuation of Water in hydropic Cases, but it ought to be corrected on Account of its Violence. An Infusion of the Bark of the Root of *Ebulus* is a very violent Medicine, but the Decoction is milder, the Cathartic Virtue thereof being much diminished, according to *Fernelius*, in the Boiling. *C. Hoffman* says the Berries and Seeds are inferior in Efficacy to the Root of the *Ebulus*; and I suppose, says *Ray*, the tender Shoots and Leaves are, also, of a milder Nature. The Leaves of the *Ebulus* being bruised and applied, are no less effectual in curing Combuſtions than those of the *Sambucus*. The Leaves boiled in a Lixivium, and externally applied in Fomentations, are of Service, also, in mitigating the Pain of the Gout, as we ourselves have in Part experienced; the Oil of the Seeds by Expression does the same more effectually; the Berries, as well as those of the *Sambucus*, dye the Hair.

For Affections of the Spleen, take of distilled Water of *Ebulus* to the Quantity of about four Ounces, for ten or twelve Days in the Morning fasting. This is an approved Prescription of *Du Val*, a Doctor of Physic, for Pains, Inflammations, and Obstructions of the Spleen.

6. *Sambucus*; humilior; frutescens; foliis eleganter variegatis. *Suth.*

7. *Sambucus*; humilis; five *Ebulus*; folio laciniato. *C. B. P.* 456.

8. *Sambucus*; major; folio nigriori. *Boerb. Ind. Alt. Plant. Vol. 2.*

SAMBUCUS PALUSTRIS. A Name for the OPULUS.

SAMBUCUS ROSEA. A Name for the *Opulus*; *flore globoso.*

SAMECH, in *Paracelsus*, according to *Rulandus*, is Tartar, or Salt of Tartar.

The *Balsamum Samech Paracelsi* is thus prepared.

Take of the best and purest Salt of Tartar, one Pound; reduce this to a strong Lixivium, with a sufficient Quantity of Rain-Water; then dissolve and boil in Rain-Water one Pound of Cream of Tartar; mix both Solutions, Drop by Drop, till you observe the Effervescence totally gone; then suddenly filtrate what is capable of Filtration, and evaporate to the Form of a Salt; and thus you have the *Balsamum Samech* of *Paracelsus*; which may be rendered more perfect in the following Manner.

Take of this inverted Salt of Tartar any Quantity; pour upon it a Quantity of alcohol of Wine, sufficient to rise three Finger-Breadths above it: Let them stand in Digestion till the Spirit of Wine has assumed a highly red Colour; then pour off the Spirit of Wine, and add a fresh Quantity of it. Continue this till you have enough of the Tincture; then mix all the Portions of the Tincture together, and evaporate to an Half; for by this Means is prepared a Medicine, which powerfully carries off the Tartar of the Blood by Urine, and effectually expels Sand and Stones from the Kidneys.

The Dose of the Salt is from half a Scruple to a whole Scruple, in some proper diuretic Liquor; and the Dose of the Tincture from one Scruple to half a Dram. *Collectan. Chym. Leyd.*

SAMEN. Barley. *Rulandus.*

SAMIA TERRA, Offic. Charlt. Foss. 3. Aldrov. Mus. Metall. 239. Matth. 1391. Worm. 5. EARTH OF SAMOS.

This is an argillaceous, sebaceous, pinguious, and ponderous Substance, of a white or pale Colour, and astringent Taste. It was brought from the Island of *Samos*; and is recommended by *Dioscorides* for checking Fluxes. It agrees in Virtues with the *Lemnian Earth*.

SAMIES. An obscure Term in *Paracelsus*, which is said to import the secret Effect, or Influence of the Air.

SAMIUS LAPIS. The *Samian Stone*. It is found in the Island of *Samos*, and is used by Goldsmiths in polishing and brightening Gold; the white and ponderous is the best.

The *Samian Stone* is astringent and refrigerating; for which Reason, being taken inwardly, it is of Service in stomachic Disorders. It quickens and preserves the sensitive Organs [for ἀμυλνικὴν I read ἀμυλνική], and used with Milk, is effectual in Defluxions upon the Eyes, and in Ulcers. Employed as an Amulet, it is supposed to accelerate the Birth, and to prevent Miscarriage. *Diosc. Lib. 5. Cap. 173.* See ALANA TERRA.

## SAMOLOIDES.

The Characters are;

It hath a Flower consisting of one Leaf, which is cut into four Parts almost to the Bottom, and expands in form of a Star. In the Centre of the Flower arises the Pointal, which is surrounded at Bottom by a Number of slender Threads, which are expanded, and accompanied by four Chives. This Pointal afterwards becomes an oblong Seed Vessel, which is Vivale, and contains flat Seeds.

*Boerhaave* mentions but one sort of *Samoloides* which is; *Samoloides*; quæ *Capraria*, *Curassavica*; *Cabritta* vulgò dicta. *H. A. 1. 79. Boerb. Ind. Alt. Plant. Vol. 2.*

This Plant is very common in *Jamaica*, and several other Places in the *West Indies*, where it hath been by some People dried and used as Tea, from whence it had the Name. In *Curacao* the Goats feed on this Plant, from whence the Inhabitants gave it the Name of *Cabritta*. But at present it is not used by any of the Inhabitants of *America* so far as I can learn. *Millers Dictionary Vol. 2.*

## SAMOLUS.

The Characters are;

It hath a Wheel shaped Flower, consisting of one Leaf, which is cut into several Segments; the Pointal arises from the Empalement, and is fixed like a Nail in the Centre of the Flower; which uniting with the Empalement, is turned into a Fruit or Pod, opening at the Top, and inclosing many small Seeds.

*Boerhaave* mentions but one sort of *Samolus*, which is *Samolus Valerandi*. *J. B. 3. 791. Veronica, aquatica, folio subrotundo, non crenato.* *M. H. 3. 323. H. L. 622. Anagallis, aquatica, folio rotundo, non crenato.* *C. B. P. 252. Boerb. Ind. Alt. Plant. Vol. 1.*

This Plant grows wild in swampy Places, where the Water usually stands in Winter, and is seldom preserved in Gardens; it is an annual Plant, which flowers in *June*, and the Seeds are ripe in *August*.

It approaches in Resemblance to the *Veronica*, but these have a tetrapetaloidal Flower, whereas the *Samolus* is pentaphylloidal; it is endued with a slight, nitrous and antiscorbutic Virtue.

SAMPARANTAM. The Indian Name for an orbicular Fruit, the same as the *Lobus Echinatus Molucensis*. *Ponæ. Lobus Orbicularis fuscus, spinosis Tuberculis obfusus, binos Phaeolos nigros continens.* *C. B. Clusius* supposes these to have some use in the *Indies*, because all those he saw had Holes bor'd thro' them, in order to be strung; but he could not discover for what they were employ'd.

SAMPSUCHINUM. A Compound Ointment describ'd in *Dioscorides. L. 1. C. 57.*

SAMPSUCHUM. See AMARACUS.

SAMSTRAVADI. See JAMBOS.

SANALIA. The Syrian Name for those Species of Tumors which the Greeks call *Melicerides*. *Attius, Tetrabib. 2. Serm. 4. C. 15.*

SANAMUNDA. A Name for the CARYOPHYLLATA; VULGARIS.

SANCTUM LIGNUM. See GUAJACUM.

SANDARACHA. See AMBRA.

SANDARACHA GRÆCORUM. The same as REALGAR.

SANDARACHA, Officin. *Vernix Arabum.*

This is a Gum Resin, which flows from the *Cedrus Lycia major Dodon.* It is attenuant and resolvent, but is seldom used in Physic, though very much by the Varnishers, being first dissolved in Spirits of Wine. It is, also, used to embellish Writings, being first scattered on the Paper, and afterwards rubb'd with a Wolf's Tooth; for by this Means the Paper continues to bear Ink, and all Erasures disappear. It is sometimes confounded with Juniper Gum, and is very different from that kind of Orpiment, which was the *Sandaracha* of the ancient Greeks. *Greffroy.*

SANDASTROS. A precious Stone call'd, also, *Garamaites*, mark'd with yellow Spots. It is esteem'd Cordial, and good to resist Poisons, being powder'd, and taken in the Quantity of half a Scruple, or a Scruple. But *Lemery* is of Opinion, that it only acts as an Alkali, and Absorbent.

SANDILZ ANGLORUM, five *Anguilla de Arena.* The foreign Writers upon the *Materia Medica*, in particular *Lemery*, have mistaken this Word. They mean Sand-Eels; a small Fish, dug out of the Sea Sand in many Parts of *Britain*. They are somewhat longer than a Finger, about as thick, of a blue Colour on the Back, and white on the Belly. They are used in Food, and are esteem'd aperitive.

SANDIVER. See AXUNGIA VITRI.

SANDIX. See CRUSSA.

SANDYX, in *Dioscorides, L. 5. C. 103*, is Ceruss calcin'd in a Pot, till it acquires the Colour of *Sandarach*, that is, *Realgar*.

SANGUICULUM. The same as HÆMATIA.

SANGUI-



**SANGUIFICATIO.** Sanguification; that is, the Elaboration of Blood.

**SANGUIFLUUS.** The Name of a poisonous Serpent; the same as *HÆMORRHUS*.

**SANGUIFUCA.** A Filtre. *Rulandus*.

**SANGUINALIS HERBA.** A Name for the *Polygonum*. Knot Grass.

**SANGUINARIUS.** The same as *ENÆMOS*.

**SANGUINEA.** Nitre. *Rulandus*.

**SANGUINEUS.** Sanguine; that is, full of red Blood.

**SANGUINIOLUM,** in *Paracelsus*, is a Sign in the U-rine of a future Exulceration, and Apostematation.

**SANGUIPURGIUM.** A slight Fever, thus call'd by some Authors, because it is thought to purge the Blood.

**SANGUIS.** Blood.

As the Welfare of the Animal Oeconomy depends so much upon the Blood, and its due Circulation thro' the Vessels adapted to convey it to all Parts of the Body, it will be of some Importance to examine the Nature of this Fluid, and enquire into the Vital Powers by which it is elaborated, and render'd fit to support the Body in a State of Health.

All our Food consists of Animal or Vegetable Substances, Salt alone excepted, and Water, and many of these require a Culinary Preparation, in order to render them the more easily dissolvable by the Actions employed for their Resolution. The Business of Cookery, therefore, is to diminish the Cohesion of the Parts of Alimentary Substances, and partially digest them before they are taken into the Mouth; and to harden them by Dressing, as is sometimes done, is an Error of the worst Consequence with respect to Health, however it may indulge the Palate.

Aliments, then, prepar'd, or crude, are taken into the Mouth, where they are comminuted by chewing, mix'd with the *Saliva*, and prepar'd for a future perfect Digestion, towards which this is the first Step. Manducation, or Chewing is performed by means of the *Biventer*, or *Digastric* Muscles, which acting, draw the Chin towards the Breast, and open the Mouth; which again is closed by the Contraction of the Temporal Muscles, the Masseters, the external Pterygoide, and Internal Pterygoide Muscles, which being very strong, press the Jaws together with a prodigious Force.

The first Part of Manducation is, the inciding, or cutting the Aliment with the fore Teeth, which is called biting; the Food is then apply'd to the double Teeth call'd Grinders, by the varied Actions of the Buccinators, the Orbicular Muscle of the Lips, the *Zygomaticks*, the *Elevator Labiorum Communis*, the *Elevatores Labii Superioris propriæ*, the *Elevator Labii inferioris proprius*, the *Depressor Labii inferioris proprius*, the *Depressor Labiorum communis*, the *Obliquus Labii inferioris*, and the *Platysma Myoides*; when these act all together, the Cheeks and Lips are apply'd so closely to the Teeth, that no Part of the Aliment, whether solid or Fluid, can fall from betwixt the Teeth externally; but when they act separately, the Aliment is apply'd to the Teeth in such a manner as the Circumstances most require. The Tongue, also, has a very considerable Share in applying the Aliment properly to the Teeth. The Action of Mastication is of so much Importance to Health, that *Hippocrates* long ago remarks, that those whose Teeth are good, live to a very old Age. It is therefore a very great Error to swallow the Aliment, before it is duly masticated.

During the Action of Mastication, the comminuted Aliment is intimately mix'd with the *Saliva*, discharg'd from the Parotid Glands, the internal Maxillary Glands, the sublingual Glands, from innumerable Emissaries in the Tongue, Palate, Gums, and Lips, and from Glands situated in the anterior and inferior Parts of the Palate, the Uvula, and from the Tonsils. This *Saliva* is a thin, pellucid Fluid, which does not concrete by Heat; is almost void of Taste and Smell, and when agitated forms a tenacious Froth; it is separated by the Glands from the pure Arterial Blood, and during Hunger, is more copious, fluid, and acrid; after long-fasting it is very acrid, penetrating, detergent, and solvent; it excites and increases Fermentation in farinaceous and succulent vegetable Substances, and Syrups; in both Men, and Brutes in a healthy State, it is swallow'd during Sleep; and it wantonly spit out, Loss of Appetite, Indigestion, and Atrophies, are hence excited; it consists of a pretty large Proportion of Water and Spirits, and a small Quantity of Oil, and Salt, which are united into a natural Soap, very well suited to attenuate the Aliment, and dispose it to a perfect Solution.

Hence the Error is evident which those commit, who lavish this salutary Fluid, and solicit the Discharge thereof by smoking, or chewing Tobacco, or by any other Means.

The Alimentary Mass thus masticated, and moisten'd, is thrust towards the *Fauces*, whilst the Teeth are closed, the Aliment confin'd within them by the Contraction of the

Muscles of the Lips and Cheeks, and the Tongue is so directed, as to occupy all that Space betwixt the Teeth of the superior Jaw, and the Palate. Mean time the *Genioglossi*, *Styloglossi*, and *Ceratoglossi*, acting successively, from a Cavity at the Root of the Tongue, under the pendulous Veil of the Palate, the Uvula, and Tonsils; but above the *Larynx*, and *Pharynx*, and before the Membranes which cover the Bodies of the Vertebrae of the Neck, and posterior Muscles of the *Pharynx*, and bring thither all the Aliment to be swallowed down. Then the Root of the Tongue is expanded, elevated, and brought forwards by the Action of the *Genioglossi*, *Myloglossi*, *Geniohyoidæi*, *Mylohyoidæi*, *Styloceratohyoidæi*, whilst the *Os Hyoides* is applied to be pendulous Veil of the Palate, and the Foramen leading to the Nose is closed. At the same time, the *Os Hyoides* and *Larynx* are elevated by the Contraction of the *Thyrohyoidæus*. Hence the Aliment to be swallowed presses upon the *Epiglottis*, whilst the *Uvula* is depressed by its proper Muscles, and the Chink of the *Glottis* closed. At the same time, the *Genioglossi*, *Myloglossi*, *Geniohyoidæi*, and *Mylohyoidæi*, move the Root of the Tongue, *Os Hyoides*, and *Larynx*, forwards; and thus open the *Pharynx*, which is annex'd to the Root of the Tongue, the *Os Hyoides* and *Larynx*. And thus the Fauces are opened, and Room made for the Aliment to be swallowed; especially when, at the same time, the external Pterygoide Muscles, and some fibres of the Masseter, draw the intire inferior Jaw forwards, thus making more Room, and bringing forwards the *Glossopharyngæi*, *Hyopharyngæi*, *Thyropharyngæi*, and *Cricopharyngæi*. Thus the superior Part of the *Pharynx* is dilated, and applied to what is to be swallowed, whilst the superior Orifice of the *Pharynx* closes, the *Stylopharyngæi* being contracted, and *Oesophagæi* relaxed, for the farther Passage of the Aliment. At the same time, the internal and external Muscles of the *Gargareon* act in such a manner, as to elevate and expand the Veil of the Palate, and to prevent any Particles from falling either into the Chink of the *Glottis*, or Passage to the Nose. The very instant afterwards, all the contracted Muscles abovementioned are suddenly relax'd, and both the *Sternohyoidæi*, *Sternothyroidæi*, and *Coracoceratohyoidæi*, act; by which Mechanism the broad posterior Surface of the Cricoid Cartilage is pressed downwards and backwards against the *Pharynx*. And at the very same Moment, the *Glossostaphylini*, *Pharyngostaphylini*, and *Azygos* Muscle of *Morgagni*, act with a kind of convulsive Motion, and great Force; so that the Veil of the Palate then distended, and expanded upwards, is suddenly drawn downwards, in such a Manner as to press the Aliment into the Orifice of the *Oesophagus*, now elevated, and dilated by the Contraction of the *Glossostaphylini*, and *Pharyngostaphylini*. With these concur the same kind of convulsive Motion in the *Glossopharyngæi*, *Hyopharyngæi*, and *Thyropharyngæi*; by which the Tongue, *Os Hyoides*, *Larynx*, and posterior Part of the *Pharynx* are so pressed together, as to assist, at the same time, with considerable Force, the Intrusion of the Aliment into the Orifice of the *Oesophagus*. Thus the *Pharynx* is closed, whilst the *Oesophagæus* contracts, and the Aliment is retained in the Cavity of the *Oesophagus*, under the *Pharynx*, and is immediately farther protruded into the Stomach, by the Contraction of the longitudinal and orbicular Fibres of the muscular Coat of the *Oesophagus*.

By this exquisite Mechanism is the Aliment conveyed to the Stomach. Hence, however, it is evident, that many Disorders in these Parts may interfere with Deglutition, render it laborious, or utterly subvert it; in particular, Tumors in the Parts subservient thereto, and Palsies of the Muscles. Deglutition may, also, be prevented, by a continued swallowing of dry Substances: For by this the Mucus, which lines the Inside of the *Fauces*, *Pharynx*, and *Oesophagus*, is abraded, and wasted; and thus the Organs, subservient to Deglutition, are rendered too dry to perform their respective Offices. When the Uvula is lost, or the Veil of the Palate slit, Deglutition is incommoded; in the first Case, the Person thus affected is subject to a Cough when he attempts to swallow, because a Part of the Aliment is subject to fall into the *Larynx*; in the second Case, the Aliment to be swallowed passes into the Nostrils.

As soon as the Aliment has passed into the Stomach, the superior Part of the inferior Muscle of the Diaphragm contracts upon the inferior Part of the *Gula*, which passes thro' it, and thus closes up the Stomach.

The Food thus moistened, and at the same time full of Air, deposited in the close, moist, and warm Stomach, would there spontaneously begin to ferment, or putrify, according to the different Materials of which it consisted; and either Way would be greatly changed, either into an Acid, Alcalescent, rancid, or glutinous Mass. But the villous Coat of the Stomach, which immediately embraces the alimentary Mass, supplies it perpetually, by innumerable Emissaries, with



a thin, pellucid, frothy Humour, abounding with Spirits, and a little Salt, which, in the most voracious Animals, is neither alkaline nor acid, but somewhat acrid, after long fasting; and with a more viscid and mucous Humour, discharged into the Cavity of the Stomach, from the Emissaries of certain Glands destined for the Secretion thereof. See COELIA.

If it be considered that the alimentary Mass is moistened by the Saliva brought into the Stomach perpetually, and that in large Quantities, from the Mouth, *Fauces*, and *Oesophagus*; that the Stomach dilutes it by the Humours abovementioned; that the Relicks of former Aliment is mixed and agitated with it; that the Air contained in the alimentary Mass rarifying, divides it intimately; and that the Heat of the Part excites and promotes the Action of all these, 'tis evident that the Food must in the Stomach be macerated, diluted, swell'd, attenuated, fermented, and dissolved, and thus rendered fit to mix with the Animal Juices, and pervade the minute Canals of the Body.

Besides these, the Action of the muscular or carnos Coat of the Stomach must be taken into Consideration, which closely embraces all the Contents of this Organ, mixes them and grinds them together by a Sort of vermicular Motion, exposes them to the Action of the surrounding Parts, retains the more gross Parts, and expels the more Fluid towards the *Pylorus*, and thence into the *Duodenum*.

Several other Circumstances must be considered as promoting the Digestion of the Aliment in the Stomach; as, First, the Heat communicated to this Organ by all the surrounding Parts. Secondly, the perpetually-repeated Strokes of innumerable Arteries in the Diaphragm, Omentum, Spleen, Liver, Pancreas, Mesentery, and Peritonæum, upon the Stomach. Thirdly, the violent Vibrations of the *Aorta*, situated immediately under the Stomach. Fourthly, the Action of the nervous Fluid, with which no Part is more copiously supplied than the Stomach; a Circumstance not yet perfectly understood. Fifthly, the perpetual Compressure of the Stomach, and all the abdominal Viscera, by the reciprocal Action of the Diaphragm and abdominal Muscles, during Inspiration and Expiration.

The Effects of all these Causes, acting with united Force, must be,

First, To levigate, dissolve, and intimately mix the most easily mutable Parts of the Aliment, and to press them thro' the *Pylorus* into the *Duodenum*.

Secondly, To retain the more tenaceous Parts; and by a Continuation of the same Causes, to produce the same Effects upon them.

Thirdly, To render juiceless the Membranes, Tendons, Cartilages, and Bones of Animals; and the Skins, Filaments, and harder Parts of Vegetables; and thus to expel them out of the Stomach, in order to their being discharged by Stool.

It is worthy of Remark, that all the Juices employed in bringing about the Digestion of the Aliment, are neutral and saponaceous, and neither alkaline nor acid. Hence appears the Absurdity of those idle Dreams of Authors relative to Ferments, and alkaline or acid Menstruums in the Stomach, than which nothing is more absurd.

We have thus conducted the Aliment to the Stomach, whence it is expelled into the *Duodenum*, where it undergoes some considerable Alterations, from the Action of that Intestine, and of the Bile and pancreatic Juice thereon. For which see the Articles DUODENUM, BILIS, CHYLUS, and PANCREAS.

In the Intestines the Chyle is separated from the *Fæces*, which are expelled by the peristaltic Motion of the Intestines thro' the Arms, whilst the same peristaltic Motion impels the elaborated Chyle into the Orifices of the lacteal Vessels, which is afterwards convey'd to the Receptacle of the Chyle, and thence through the thoracic Duct to the left subclavian Vein, where it mixes with the Mass of Blood, and by the *Vena Cava Descendens* passes to the right Auricle of the Heart.

The *Vena Cava Ascendens* and *Descendens* unite in one, and open into the right Auricle, where they unite. There is a little Protuberance made by their Coats on the Inside of the Canal, like an Isthmus, which directs the Blood both of the one and the other into the Auricle, and so hinders them from rushing one upon another. The right Auricle, in its Diastole, receives the Blood from the *Vena Cava*, which by its Systole is thrust into the right Ventricle: (For the tendinous Circle, which is at the Mouth of the Cava, contracts and hinders the Blood to return into it) which at the same time is in its Diastole. In the Systole of the right Ventricle, the Blood is thrust into the Pulmonary Artery: For it cannot return into the Auricle, because of the *Valvula Tricuspidis*, which communicates with the *Vena Pulmonalis*, which carries back the

Blood into the left Auricle, which in its Systole thrusts the Blood into the left Ventricle, which is then in its Diastole. In the Systole of this Ventricle the Blood is thrust into the *Aorta*, (for it cannot return into the Auricle, because of the *Valvula Mitralis*) which carries it through all the Body. Now the *Aorta*, when it comes out of the Heart, ascends a little upwards, and then turns downwards to form the descending Trunk; and from the upper Side of this Turning the cervical and axillary Vessels arise. By this Artifice the Blood collides against the Sides of the *Aorta*; its Force is broken; Part of it is taken in by the Mouths of the ascending Branches; but its greatest Part is directed downwards.

The Blood conveyed by the Arteries, is carried to corresponding venous Canals, and so again to the right Auricle of the Heart.

Let us now consider which Way the Blood circulates in the Foetus; for this you must observe, that in the right Auricle, on the lower Side of the Protuberance of the Cava, just opposite to the Mouth of the *Cava Ascendens*, there is a Hole called the *Foramen Ovale*, which opens into the *Vena Pulmonalis*. This Hole has a Valve, which suffers the Blood to enter the Vein, but hinders it to come back again. There is likewise a Passage, or Canal, which runs from the Trunk of the Pulmonary Artery to the Trunk of the *Aorta*.

Now the Blood, which comes from the Placenta, by the umbilical Vein, into the *Vena Portæ*, is sent into the Cava by a Canal, which goes straight from the Trunk of the *Portæ* to the Trunk of the Cava in the Liver. This ascends the *Vena Cava*, and is directly thrown through the *Foramen Ovale* into the Pulmonary Vein, which carries it into the left Ventricle, which throws it into the *Aorta*, to be distributed through all the Body. But the Blood, which comes down the *Vena Cava Descendens*, is diverted by the Isthmus of the Cava, from the *Foramen Ovale*, and falls into the right Ventricle, which thrusts it into the Pulmonary Artery, from whence Part of it is immediately carried by the communicating Canal into the *Aorta*. The Reason of these Passages in a Foetus was, because the Blood could not all pass thro' the pulmonary Blood-Vessels, they being too much compressed by the Substance of the Lungs; but as soon as the Child is born, and the Pressure is taken off from the Blood-Vessels by the Distension of the Lungs with Air, the Blood finding a free Passage thro' the Lungs, runs no more by the communicating Canal, whose Direction, likewise, is not so favourable for its Reception as before; because the pulmonary Artery being stretch'd out with the Lungs, makes it go off at right Angles, and therefore it dries up. And now the pulmonary Veins being distended with the greater Quantity of Blood, which it receives from the Lungs, the Valve of the *Foramen Ovale* is pressed close to its Sides, denying a Passage to the Blood from the Cava, to be mixed with the rest of the Blood. By this you see, that the Blood, which comes from the *Vena Cava Descendens*, passes only through the left Ventricle, whilst the Blood which comes from the *Cava Ascendens* passes only through the right Ventricle.

As the Blood is the only Treasure of Life, so long as it is possessed of a laudable Quality, and in a due Quantity carried through the vascular Parts of the Body, so 'tis necessary the Physician should, by all proper Methods, investigate its Nature and various Mixtures in different Constitutions and Diseases. But nothing has a more direct and immediate Tendency to render us acquainted with the genuine and real Nature of the Blood than a chymical Analysis of it.

In order therefore to this, we must first by statical Experiments discover the Proportion between the solid and fluid Parts of the Blood, both in a fluid and morbid State. The Estimate is to be made in the following Manner: The Blood taken from the Vein is first to be weighed, and then put into a Tin Vessel, in which it is to be dried; then the remaining dry Powder is again to be weigh'd, by which Means the Quantity of the solid and fluid Parts of the Blood may be exactly determined. The larger the Quantity, therefore, there is of a solid Matter, the more thick and tenacious the Blood is; a Circumstance which surprisingly favours the Generation of Obstructions.

We are taught by the Laws of Mechanics, that three of the fluid, and only one of the solid Parts of the Aliments, are necessary to the Preservation of Health. Hence we justly infer, that there ought to be a due Proportion between the Aliments and Drink, since the former by no means contain a due Quantity of Fluid or Moisture.

In the above-mentioned Experiment, 'tis observable that the aqueous Part of the Blood is far sooner evaporated than the same Quantity of any Water placed in a similar Vessel, and exposed to the same Degree of Heat; a certain Proof that the Water mixed with the Blood and vital Humours, is not gross and crude, but highly thin and volatile. Notwithstanding



ing this Circumstance, the human Blood is specifically heavier than Water, on Account of the solid Principle it contains; for if a Vessel full of Water weighs nine Ounces and six Drams, upon pouring out this Water, and filling it with human Blood, its Weight is observed to amount to ten Ounces and two Drams. So that in this Case, the same Quantity of human Blood surpasses the like Quantity of Water by more than half an Ounce.

If the Serum floating on human Blood is put into a Silver Spoon, and held upon live Coals, it is like the White of an Egg, formed into a hard and fissile Body; a certain Proof that this Serum is turgid with a large Quantity of nutritious Juice. And, like the White of an Egg, is it neither of an alkaline or an acid Nature, because it neither produces an Effervescence with Acids nor Alcalis. 'Tis, therefore, no Wonder that it should be coagulated by a Solution of Alum, Oil of Vitriol, and highly rectified Spirit of Wine. Hence 'tis obvious how prejudicial these Liquors must be to the vital Texture and Motion of the Blood.

Blood newly taken from the Vein is totally resolved into Serum, when exposed to a gentle Heat, which is so far from rendering it more solid, that it gradually and successively resolves the Coagulum. If this Heat is continued for a considerable Time, the Blood is still rendered thinner by its Continuance, and, just like the White of an Egg, begins to grow putrid, in which State it not only has a fetid Smell, but also produces an Effervescence, when mixed with Acids. Hence 'tis obvious, that an alkaline Salt is produced by putrefaction. From this Experiment we learn, that the Blood and Serum, by the natural Warmth of the Body, in process of Time degenerate into Excrements, such as Sweat and Urine, and that an Accession of new Chyle is always necessary; otherwise, a long continued Hunger may prove the Cause of Death.

When human Blood is subjected to Distillation from a Glass-Vessel, exposed to a gentle Heat, a large Quantity of Water is yielded, which has neither the Appearance of an Acid, an Alkali, nor any spirituous Principle. Hence 'tis obvious, that the spirituous Principle of the Blood is highly moveable, but by no means sulphureous, phlogistic, or of an alkaline and volatile Quality.

If after abstracting the Phlegm of the Blood from the Cucurbit by a very gentle Heat, the coagulated Mass left in the Bottom is put into a Glass Retort, and exposed to a brisk Fire, there is first obtained a yellowish Spirit, and a yellow Oil, after which a volatile white Salt adheres to the Sides of the Vessel in various Figures. Then, upon increasing the Fire, a gross Oil which falls to the Bottom, is obtained, and a large Quantity of volatile Salt ascends.

From the Caput Mortuum no fixed Salt is obtained, except perhaps common Salt, which generally happens if the Person has used large Quantities of that Salt. When the Caput Mortuum is committed to an open Fire, a small Quantity of a whitish Earth remains.

If an equal Quantity of Quick Lime is added to human Blood before Distillation, then, a more pure volatile Salt is obtained, or 'tis rather better to rectify all the Substances obtained from Blood, with Quick Lime.

But we are principally to advert to that Experiment, in which, without the Assistance of Fire, which destroys the primitive, and induces a new Texture, by an Affusion only

of warm Water, the Blood is resolved into its Elements; for if the Blood is dried, reduced to a Powder, and put into warm Water, this Water becomes reddish, and there remains a viscid Matter, of a brownish Colour, which cannot be dissolved by Water. And this Matter, indissolvable on account of its glutinous Substance, is twice as large in Quantity as the Matter capable of Resolution. If it is dried, there remains a Powder of a dark Colour, which easily takes Flame, a certain Proof that it consists of subtile sulphureous Parts, whereas the Remainder consists of more fixed and terrestrial sulphureous Parts.

These two Substances in the Blood may be discovered by the Eye, if Blood flowing from a Vein is received into tepid Water, which is soon tinged with a reddish Colour, whilst in the Bottom of the Vessel there remain white Flakes, composed as it were of Spiders Webs, and incapable of being resolved by Water. Nor is it to be doubted that a Blood thus abounding with such a gross Substance, is very subject to generate polypose Concretions, and produce Obstructions of the Vessels. *Hoffman, Obs. Phys. Chym. Lib. 2. Obs. 21.*

For an Illustration of the Texture and Consistence of the Blood, Dr. *Langrish* took the Pains to examine it in a statical Way, in every Stage of an acute continual Fever, where Blood could be drawn with Safety; in order to discover the different Proportions of Serum and Gore, and the different Powers of Cohesion between the red Globules which constitute the Crassamentum.

But before we proceed, continues the Doctor, to the Experiments themselves, it may be proper to advertise the Reader of the Manner in which they were made. First, I always took Care to bleed into a Porringer as near the same Shape and Size as possible; because a larger Surface of Blood should not be exposed to the Influence of the Air in one Trial than in another. Secondly, all the Blood was received in one Porringer, because I have found by Experience, that a Pound of Blood does not separate so much Serum when divided into several Parcels, as when contained in one Vessel. Thirdly, I always set the Blood in a cool Place, and after it had stood twenty four Hours, I very carefully weighed the Serum and Cruor separately, in order to find their different Proportions. Fourthly, I took a very thin Glass Tube, twelve Inches long, and one Third of an Inch in Diameter, and having hermetically sealed up one End of it, I blowed it out to an obtuse Point, about the Bigness of a middling Pea. Now this Point being set upon the Crassamentum, the Weight of the Tube was not of itself sufficient to press through; and but very seldom when filled with Water; so that my Way of trying the Cohesion of the Gore, was to pour Mercury into the Tube, till it was just heavy enough to cut its Way through; and as the Tube was exactly graduated, I could by these Means very nicely determine the Power of Cohesion between the Globules which constituted the Crassamentum.

*N. B.* Every Degree was one Eighth of an Inch; so that when it is said in the following Table, *Degrees of Cohesion*, N. 48. we mean that the Cruor was so tough as to be equal to the Weight of six Inches of Mercury, besides the Weight of the Tube, which was three Drams, and fifty six Grains.



The Age of the Person.	The Day of the Disease.	The Symptoms.	The Quantity of Blood taken away.	The Quantity of Serum.	The Taste and Colour of the Serum.	The Colour and Consistence of the Crassamentum.	What Days the Crises, happened, and by what Outlets.
A Man aged 45.	IIId.	Intense Heat, Thirst, Vomiting, Looseness, excruciating Pains in the Head, Back, and Loins, and clear, pale, limpid Urine.	13 Ounces and two Scruples.	3 Ounces, 3 Drams, and 1 Scruple.	Something more brackish than healthy Serum, and of a flaming yellow.	Very florid, except here and there a blue Speck. Degrees of Cohesion 34.	On the seventh Day by Sweat and turbid Urine.
A Woman aged 32.	Ist.	A quick full Pulse, extreme Pain in the Head and Loins, and delirious.	14 Ounces and 1 Dram.	3 Ounces, 5 Drams, and 2 Scruples.	Almost insipid and of a wheyish Colour.	Extremely florid. Degrees of Cohesion 26.	On the ninth Day by profuse Sweats and thick Urine.
A Man aged 23.	IVth	A foul, moist Tongue, crude Urine, strong full Pulse, Delirium, excessive Heat, and frequent Vomiting.	15 Ounces 2 Drams, and twenty-five Grains.	3 Ounces, 1 Dram, and 1 Scruple.	Quick, saline Taste, and straw-coloured.	Exceeding florid. Degrees of Cohesion 38.	On the 7th and 8th Days by an Hemorrhage at the Nose, plentiful Spitting, turbid Urine, and moderate Sweats.
A Man aged 42.	IIId	Great Incalescence, strong full Pulse, a Pain in the Head and Back, giddy and nausea Ventriculi.	14 Ounces, 1 Dram, and 1 Scruple.	5 Ounces, 2 Drams and 16 Grains.	Brackish, and of a Citron Colour.	Of vivid red, with here and there a fizy Speck upon it. Degrees of Cohesion 43.	Died on the 7th Day. by turbid Urine, and profuse Sweats.
A Boy aged 12.	IIId.	A Phrenzy with extreme Talkativeness, a wild Stare with his Eyes, a dry brown Tongue, a thick black Film or Skin adhering to the Teeth and Lips, Subfultus, and a quick labouring Pulse.	6 Ounces 1 Dram.	1 Ounce, 16 Grains.	Very Salt, and of a bright yellow Flame-Colour.	A thin white Coat at Top, and florid underneath. Degrees of Cohesion 48.	Died on the 7th Day.
A Boy aged 10.	IVth	A flushed Countenance, an extreme quick full Pulse, a brown parched Tongue, with a white Lift round it, a Delirium, high-coloured Urine and costive.	6 Ounces. 2 Drams, 12 Grains.	1 Ounce, 3 Drams, 1 Scruple.	Brackish, clear, and Flame-coloured.	Of a vivid Colour. Degrees of Cohesion 23.	On the 8th and 9th Days, by moderate Sweats, and five or six loose Stools.
A Girl aged 11.	IIId	Exceeding delirious, a full quick Pulse, pale limpid Urine, a dry parched Skin, and costive.	7 Ounces, 2 Scruples.	2 Ounces. 14 Grains.	Very pungent, and extremely yellow.	Of a vivid Red. Degrees of Cohesion 26.	On the 10th Day, by spitting, turbid Urine, and swelled Legs.
A Man aged 34.	Vth	A burning Heat, unquenchable Thirst, general Uneasiness, Watchings, full Pulse, and high-coloured Urine.	12 Ounces 1 Dram, 16 Grains.	2 Ounces, 15 Grains.	Quick saline Taste, and of a bilious Colour.	Very florid. Degrees of Cohesion 56.	On the 11th and 12th Days by profuse Sweats, turbid Urine, and Spitting.
A Man aged 26.	Ist.	Giddiness, sick Fits, great Incalescence, a strong full Pulse, Pains in the Head and Back, and clear limpid Urine.	14 Ounces, 2 Drams.	4 Ounces, 36 Grains.	No difference to be perceived from healthy Serum.	Of a good Colour. Degrees of Cohesion 22.	On the 6th Day by eight or nine loose Stools.
A Woman aged 22.	IIId	Excruciating Pains in the Head and Loins, extreme Thirst, inward Burnings, dry parched Skin, and strong full Pulse.	12 Ounces, 1 Dram, 1 Scruple.	3 Ounces, 8 Grains.	Pungent, saline, and draw-colour'd	Exceeding vivid. Degrees of Cohesion 36.	The 8th Day by the menstrual Discharge, and moderate Sweats.
A Man aged 24.	Vth	A very strong, quick, full Pulse, Vertigo, bilious Vomiting, intense Heat, and unquenchable Thirst.	14 Ounces, 26 Grains.	3 Ounces, 5 Drams, 1 Scruple.	Much more brackish than healthy Serum, and deeper coloured.	Very florid. Degrees of Cohesion 28.	The 11th Day by profuse Sweats and thick Sediment in the Urine.
A Man aged 46.	IIId	A brown, dry, parch'd Tongue, Pains in the Head and Back, general Uneasiness and full Pulse.	12 Ounces, 6 Drams.	3 Ounces, 1 Dram, 12 Grains.	Quick, pungent, and yellow.	A thin blueish Film at the Top, and florid underneath. Deg. of Cohesion 33.	The 9th Day by Spitting, Sweat, and thick lateritious Sediment in the Urine.
A Man aged 21.	IVth	A quick full Pulse, great Thirst, Pain in the Head, giddy, clear limpid Urine.	10 Ounces, 2 Scruples, 8 Grains.	2 Ounces, 3 Drams, 15 Grains.	Saline and bilious.	Very vivid. Deg. of Cohesion 28.	The 5th Day by an Hemorrhage at the Nose, and moderate Sweats on the 6th.
A Man aged 38.	IIId	Great Incalescence, extreme Thirst, bilious Vomiting, a parched Skin, and strong quick Pulse.	15 Ounces, 2 Drams.	3 Ounces, 4 Drams, 6 Grains.	Pungent, and very yellow.	A delicate Red. Degrees of Cohesion 34.	The 7th Day by profuse Sweat.
A Girl aged 15.	XII	A Phrenzy, subfultus Tendinum, a full labouring Pulse, intense Heat, and a parched brown Crust upon the Tongue.	6 Ounces.	1 Ounce, 3 Drams.	Very salt, and of a bright Flame-colour.	Florid and without a Speck upon it. Degrees of Cohesion 28.	The 22d and 23d Days by moderate Sweats, Spitting and very turbid Urine.
A Man aged 36.	XIII	A full heavy Pulse, lividous Urine, a slight Pain in the Side, a quick and difficult Respiration, a black parch'd Tongue, intense Heat, subfultus Tendinum, and delirious.	8 Ounces, 1 Dram, 16 Grains.	2 Ounces, 22 Grains.	Exceeding pungent, and of a deep bilious Colour.	A thin Buff-coat at Top, and more dusky than ordinary underneath. Degrees of Cohesion 64	Died on the 19th Day.



I must beg Leave to take Notice of the Reasons which induced me to draw Blood from one Patient on the twelfth Day, and from another on the thirteenth Day of the Disease; especially considering the great Usefulness of Bleeding in the Beginning of this Distemper, and the Danger of doing it towards the Crisis. 1. I was not consulted for either of them till those Days on which I drew Blood. 2. No Evacuations of either Kind had been made before these Times. 3. As to the Girl it was about the Time of Age that we might expect the menstrual Purgations; Pains in her Back, Giddiness, Retchings to Vomit, and the like Symptoms preceded this Illness; her Pulse was full and weak, and seemed to struggle for want of Room. 4. As to the Man, the Day before I visited him, he had taken an Ounce of the Cortex, his Apothecary mistaking a little Remission, for a true Intermission of the Fever; Subtusities, intense Heat, a difficult Respiration, and a slight Pain in the Side soon followed the Use of the Cortex; and for these Complaints I found him taking Boluses, of Lapis Contrayervæ, Saffron, Castor, Sal Volatile succinatum, and the like. By this Treatment I presume, he became delirious, his Countenance was flushed, his Tongue black, and dry, his Urine extremely high-coloured, his Pulse full, heavy and something unequal. These were the Symptoms, and these, in my humble Opinion, were sufficient Indications for Phlebotomy, though so late in the Disease. I must add, that I never saw the Blood stream out so violently, and with so large an Arch as it did from the Arm of the Man; and had not my Timidity prevented taking away more Blood, I am persuaded, I had stood a better Chance for the Recovery of my Patient.

From these Experiments it plainly appears, that in ardent Fevers, the red Globules exceed the Proportion which they ought to bear to the serous Part of the Blood: For according to Mr. Boyle's Experiments and Observations of the Weights of the Crassamentum and Serum, after they have separated one from another, it appears that the Quantity of Serum which may be poured off from the Crassamentum, is about one Half of the whole Mass. And indeed, from Experiments which I have purposely made on the Blood of three young Men in perfect Health. I find it to be nearly the same; the Serum in all three Trials, much exceeding one third of the whole Mass, though I cannot say that in any of them, it fully arrived to one Half.

Here we may also observe the different Consistence of the Cruor in a febrile State, from that in Health. The Degrees of Cohesion in the Blood of the three young Men just mentioned, were eight, nine, twelve, or the most viscid of their Blood gave way to the Weight of one and a half Inch of Mercury; whereas we find in the Tables above, that the Cohesion of the Globules which constituted the Crassamentum, was sometimes equal to a Column of Mercury seven or eight Inches in Height.

Since therefore the Blood in acute Fevers is more than ordinary viscid and tenacious, and contains too great a Quantity of red Globules, notwithstanding the usual most fluid Excretions are greatly diminished, even from the very Beginning of the Disease; let us enquire by what Means this Alteration is most likely to be produced.

That accurate Observer of Nature *Leuwenhoek* has shewn us, that the largest red Globules are made up of six smaller Spheres clustered together in a very regular manner; and that so nicely, that in a perfect Globule the Composition comes to be perceptible. He likewise assures us, that he saw Globules in the Blood, much less than those which composed the red Globules; whence we may reasonably conclude, there are several Orders of Globules in the Mass of Blood, the smallest of which, if properly united to others, and those again to the largest Order, exhibit red Globules. And on the contrary the largest Globules may be broken down into their compounding smallest Globules, and by that Means come again under the Denomination of Lymph or Serum.

Hence we may conclude, that whatever will dispose the smallest Order of serous Globules to aggregate or unite into larger ones, and those again into such as are still larger, will at last produce red Globules. Now we know of nothing more likely to produce this great Change than strongly attracting, saline and sulphureous Particles, together with Heat, which invigorates their attractive Power, and thereby greatly conduces to the fixing and uniting the smallest Globules to each other.

It is certain that most of the Antecedents of Diseases are disposed to charge or impregnate the Blood with saline and sulphureous Matter; and indeed, I can give no other Reason why one Man shall catch cold, and have a Fever, and another, perhaps, shall have the perspiratory Ducts more fully stop'd, and yet have only a serous Defluention, from the Nose, Eyes, or Lungs, but because in one the Blood is more impregnated, by an imtemperate Use of the Non-naturals, with saline and

sulphureous Particles, than in the other; and for that Reason the Juices are more likely to become hot, acrid, grumous, and fit for the Production of a Fever.

To be a little more explicit: Let us reflect on the different States of the Blood under different Diseases. In the Leucoplegmatia, Anasarca, Ascites, and indeed in all Distempers where the vital Powers are depressed, the Pulse weak, low, and slow, and the Heat of the Body is much below the natural Standard; here, I say, we may observe how very subject the Globules of the highest Order are to lose their Contexture, and to be broken down into the smaller compounding Globules, so as to increase the Quantity of Serum. Whereas in ardent Fevers, where the saline acid sulphureous Particles abound too much, where the vital Heat is augmented above the Healthful Standard, and all the Powers of the Body exert themselves to the greatest Degree; there we may observe the smallest compounding Globules intimately united into larger ones, whereby the red Globules increase, and the whole sanguineous Mass becomes more dense, heavy, viscid and tenacious.

Hence we have good Reason to conclude, that the most necessary Requisites towards forming of red Globules in the Blood, and causing these red Globules to coalesce, are a certain Proportion of saline and sulphureous Particles, and a certain Degree of Motion and Heat; whereby the Constituent Parts of the Blood are made to attract each other more vehemently.

Heat, which coagulates the White of an Egg, has not its Effect merely by evaporating the most fluid Part, and thereby suffering the other Parts to approach nearer and nearer to each other; but it performs this sudden and wonderful Change, by increasing the attracting Power of the saline and sulphureous Particles, whereby the smaller Order of Globules run into each other, and form larger ones; and these again join with others till the whole Mass is consolidated.

Thus it is with the Blood; a proper Quantity of saline and sulphureous Matter, and a moderate Degree of Heat are perfectly necessary towards maintaining a natural and healthy Crasis; but whenever they are increased above, or decreased below the natural Standard, either in regard to their Quantity, or Motion, the Blood will become too grumous, and florid, or too thin, limpid, and pale.

In regard to the Action of the Vessels; if they have any Share in compressing and uniting the serous pellucid Globules of the Blood, and forming them into red Globules, we may reasonably conclude, that in ardent, continual Fevers, where the Action of the whole vascular System is greatly increased, the Globules will be most of all compacted and joined together.

From the whole it appears highly reasonable to believe, that a mere Plethora of languid, inert, unactive Matter, is not the Foundation of ardent Fevers; but that the Blood at such Times is too plentifully stored with acrid, sharp, irritating, strongly attracting, saline, and sulphureous Particles. However that nothing may be wanting towards investigating the true Causes of this Disease; I have thought it worth while to separate the constituent Parts or Principles of the Blood, and to take a just Estimate of their several Proportions.

By proper Distillations and the Force of Fire, we may compel Nature to an Account; and though the Bulk and Configuration of the saline and sulphureous Parts are undoubtedly much altered and commuted by the Action of Fire; yet the Proportions of the several Principles of the Blood are not increased or diminished thereby; and consequently by carefully separating and weighing them, and seeing the several Proportions they bear to each other, we may arrive at a Knowledge very useful in accounting for some of the Phenomena of Diseases, and directing us to a right Method of Cure. It is satisfying and useful as well as curious, to reduce to Measure and Weight the constituent Parts of the Blood; and I am persuaded no inquisitive Person will judge it a vain Undertaking.

#### A CHYMICAL ANALYSIS OF THE BLOOD, BOTH IN HEALTH AND IN ARDENT FEVERS.

##### EXPERIMENT I.

Eight Ounces of Blood, taken from a young Man in perfect Health, and distilled, afforded as follows.

	Ounces.	Dr.	Gr.
1. Lymph	6	4	45
2. Volatile Salt			38
3. Oil			52
4. Cap. Mort before Calcination		7	25
5. Cap. Mort. after Calcination		2	10
6. Fixed Salt			5
			The



The first three or four Ounces of Lymph seemed to contain little volatile Salt or Oil, it not being fetid or disagreeable either in Taste or Smell; neither did it ferment strongly with Acids; but the latter Part was highly impregnated therewith; and fermented violently with Oil of Vitriol, made a white Precipitate with Solution of Sublimate, and turned Syrup of Violets green.

## EXPERIMENT II.

From eight Ounces of Blood drawn from a Man of fifty Years of Age, in perfect Health, something corpulent, and one who indulged in good Eating and Drinking, without using much Exercise, I obtained,

	Ounc.	Dr.	Gr.
1. Lymph	6	4	25
2. Volatile Salt			46
3. Oil		1	12
4. Cap. Mort. before Calcination		7	37
5. Cap. Mort. after Calcination		3	15
6. Fixed Salt			8

Two Grains of the fixed Salt being laid upon a Piece of clean Glass, I dropt upon it one Drop of the Oil of Vitriol, whence arose a violent Fermentation, and a white pungent Fume.

Four Grains of the same Salt being dissolved in two Ounces of Rain-Water, I added to it four Drops of a Solution of Silver in *Aqua Fortis*, which caused a manifest Milkiness, and evidently discovered the fixed Matter to be Sea-Salt; for no other Salt produces a white Fume with Oil of Vitriol, or a white Cloudiness with a Solution of Silver.

## EXPERIMENT III.

Eight Ounces of Blood extracted from a Man, on the second Day of an intense Burning Fever, afforded,

	Ounc.	Dr.	Gr.
1. Lymph	6	4	6
2. Volatile Salt		1	5
3. Oil		1	32
4. Cap. Mort. before Calcination		7	27
5. Cap. Mort. after Calcination		2	45
6. Fixed Salt			4½

## EXPERIMENT IV.

Eight Ounces of Blood drawn from a Man of a robust Constitution, on the fourth Day of a most acute Fever, afforded,

	Ounc.	Dr.	Gr.
1. Lymph	6	3	28
2. Volatile Salt		1	34
3. Oil		1	27
4. Cap. Mort. before Calcination		7	56
5. Cap. Mort. after Calcination		2	54
6. Fixed Salt			6

The fixed Salt in these Experiments, exhibited the same Phenomena with that in the preceding ones.

The Lymph in the two last Processes seemed to be more strongly charged with volatile Salt and Oil, than the others, and fermented more violently with Acids.

These were the Proportions of the several Principles which the sanguineous Mass afforded us by the most careful Distillation. Whence it is evident, that the saline and sulphureous Parts did abound more in those seized with acute Fevers, than in those in Health.

## DISEASES ARISING FROM TOO GREAT A VELOCITY OF THE BLOOD.

All the Fluids contained in any Vessels arising from the Aorta, are secreted from the Blood alone, which a little before was so effectually mixed in the Right and Left Ventricles of the Heart, that it apparently resembled one homogeneous Fluid.

In Disorders arising from too brisk a Circulation of the Blood, 'tis necessary jointly to consider both the Solids and Fluids of the human Body, the Nature and Properties of the latter of which we shall now investigate.

The Blood then is that universal Fluid which flows into the Right, and is expelled from the Left Ventricle of the Heart. This Organ receives, by Means of the Veins, the whole Blood from every Part of the Body, and having received it, returns it by Means of the Arteries, to all the Parts of the human Fabric. From this Blood, all the Parts of the Body, and all the Viscera, prepare their respective Humours which are different, according to their various Structures. In the Blood therefore are contained all the Humours of the

human Body, not with respect to their particular Nature and Quality, but with respect to their Matter, of which, in all the Parts, according to their peculiar Structure, that is produced which the adorable Architect of the human Body originally and wisely intended. During the Circulation, this Matter changed in all the Parts and Viscera, returns to the Heart, except some Part which is eliminated from the Body. This Fluid is called Blood, both when it is expelled from the Heart, and when it returns to it; and so long as these two Motions are continued, so long Life remains.

Hence we may affirm, that all the Humours are generated of the Blood, and contained in it.

The Blood consisting of so many different, tho' intimately mixed Substances, appears to be an homogeneous Fluid, of a red Colour, but when left to itself in a State of Rest, it is secreted and divided into distinct Parts.

This Blood, when circulating in the Vessels, contains large Globules of a determinate Bulk, a changeable Figure, and a reddish Colour; yellow serous Globules, six times smaller than those of the red Kind; a pellucid Fluid, capable of being concreted by the Fire; and a pellucid, light, and fine Water, consisting of still smaller Globules, which however cannot be discerned on account of their Transparency. The Globules of the first three Species form what we call the Serum, both of which may be discerned by Microscopes.

These Circumstances are supported by the Observations of Mr. *Leeuwenhoeck*; for the human Blood, when viewed through a Microscope is observed to consist of many spherical Parts, collected together, and swimming in a finer pellucid Liquor, whose Parts are not, for that Reason, to be discerned by the Microscope. When with Microscopes, the Motion of the Blood through the Vessels in the pellucid Parts of Animals is observed, it evidently appears that the Molecules of the Blood forced through the narrow Channels of the Vessels, and meeting with other Molecules, have their Figures every Moment changed, and are consequently of a flexile Nature. According to the same *Leeuwenhoeck*, the largest Molecules of the Blood are the red Globules, consisting of six smaller Particles, mutually joined and united; and if these smaller Globules, which by their Union form the red Globule, were not thus united, they would become yellow and be serous Globules. If the same Analogy obtained in all the other Parts of the Blood, then the serous Globules would also consist of six smaller Globules; and the Division would extend to the most subtle Fluids secreted from the Blood: But Experiments are wanting to ascertain the Truth of this; for those Parts of the Blood which are more subtle than the red and serous Globules, are entirely pellucid. But since there are numberless Series of decreasing Vessels between the Aorta, the largest Vessel, and the most minute Nerve, proportionable Humours seem to flow through all these intermediate Series of Vessels. The Congeries of the largest Molecules of the Blood, is called Red Blood, whilst all its more subtle Parts taken conjunctly, constitute what we call Serum; for the human Blood, when taken from the Veins, spontaneously separates into two such distinct Parts.

The red Part of the Blood, when concreted, and separated from the Serum by Rest alone, and in consequence of the Laxity of the Parts, is soon so resolved into Serum as to be almost totally converted into it.

When the Vein of a sound Person is opened, the Blood flowing out in a full Stream, is a few Minutes after concreted into one red Mass, which gradually begins to be lessened, because its thinner Part is expressed, has its Quantity every Moment enlarged, and generally serves for the red Mass to swim in. Some Hours after this Serum of the Blood is poured off, the red Mass appears still less, and there is a fresh Quantity of Serum collected, till at last almost the whole red Part is converted into Serum. Hence it appears, that the red Portion of the Blood is gradually colligated, and transformed into Serum. According to Mr. *Leeuwenhoeck*, this happens, because the red Globules, consisting of six smaller Molecules, being now freed from the Pressure of the Vessels, gradually recede from each other into those serous Globules, by whose Union they were form'd. Hence appears the Difficulty of determining the Proportion between the red and serous Parts of the Blood, since the former is thus gradually colligated into the latter.

Serum, long kept in an Air moderately warm and moist, by Rest alone, and the Laxity of its Parts, is resolved into a more thin, pellucid, and light Fluid, which gradually becomes putrid, and is so volatile, as to be almost totally evaporated; and these Circumstances are increased in Proportion to the Time.



As the red Part of the Blood is gradually resolved into Serum, so the Serum, when left to itself, is gradually attenuated, begins to putrify, and flies off in Vapours, leaving behind it a small Quantity of feculent Matter. But Serum, thus kept in a moderately warm and moist Place, the thinner it grows, the more acrimonious it also becomes, and can no longer be coagulated by the Heat of boiling Water, or by Alcohol. In the White of an Egg all these Circumstances happen in the same manner: For there are hardly any two Fluids more similar to each other in all their Phenomena, than the White of an Egg, and the Serum of Blood.

All Blood newly taken from the Veins, is, by a gentle Heat, but little surpassing the natural Warmth, and with a small Loss of the exhaling Part, coagulated into a solid, scissile and tenacious Mass, not to be dissolved by Water, Salt, Oil or Spirits. And the like Effect is produced by the Heat of Fluids, which is a particular Sort of Concretion, tho' in its Effects similar to the former.

The Blood, even of the soundest Persons, has a great Propensity to Concretion. When the ruptured minute Arteries of the Nose discharge Blood, it is forthwith concreted into a kind of solid Cake. But this Tendency to Concretion in the Blood is greatly augmented by an Increase of Heat: For as soon as an Heat, surpassing (perhaps) by ten or twelve Degrees the greatest Heat of *Fahrenheit's* Thermometer, is induc'd on the Blood of a sound Person, it becomes totally concreted. Hence it is, that in acute Disorders so great Danger arises from an increased Heat. But Blood once thus concreted, is not to be resolved without the greatest Difficulty. Many Substances, when mixed with the Blood, may prevent its easy Concretion; but when it is once concreted, it can hardly be resolved again; for in this Case neither Salts, nor Spirits, nor Oils, nor Soaps, are of any great Efficacy. Blood thus inspissated by Heat, is afterwards coagulated in the open Air, but then it putrifies at the same time; nor does the Concretion seem to happen, because by the Heat the most subtle Parts are dissipated: For Blood flowing from the Vein into boiling Water, is forthwith coagulated into a scissile Mass. The same Property is also found in the White of an Egg, which, when put into boiling Water, even tho' inclosed in the Shell, is forthwith indurated.

The Redness of the Blood, together with the Serum and Lymph, which are thus capable of Concretion, are produced by the Action of the Vessels, and the Efficacy of the Circulation, as the Change induced on the Nature of the Chyle, Milk and Blood, whether circulating, or without the Laws of Circulation, informs us, and is sufficiently discovered by Microscopes.

'Tis much disputed whence arise the surprising Properties of the Blood here enumerated; such as its Redness, the Yellowness and easy Concretion of the Serum. Philosophers and Chymists have advanced the most palpable Absurdities, with respect to this Affair. No Person, however, could ever, from the finest Aliments, prepare one Drop of Blood; for the human Body alone is capable of preparing its own Blood of a Matter which was not Blood before. Nor is it of any Importance whether the human Body is small, and in the Beginning of its Existence, or whether it is in a robust and adult State: For the Presence of Blood is so inseparable from the Nature of the human Body, that it is found in the weakest Infant, as well as in the most robust Man. Besides, in the human Embryo, as soon as it can be observed by the Eyes, there is red Blood even at the time when there is not the smallest Appearance of red Blood either in the Placenta, the Membranes surrounding the Embryo, or the Fluid contained in these Membranes. Hence we see, that it is the human Body itself which generates the Blood, even in that tender and mucous Principle.

When, in the first Rudiments of a human Creature, red Blood begins to be formed, cannot be easily determined by Experiments: But the incomparable *Malpighi* has demonstrated the Thing in an incubated Egg. An impregnated Hen's Egg, cherished by no Incubation, tho' viewed with the best Microscopes, is observed to contain no red Blood, either in its Shell, Membranes, White, Chalazas, Yolk, or the Bag of the Colliquament.

But in an incubated Egg there appeared a Change almost every Hour; and at the Circumference of the Cicatrix about the Yolk appeared some Vessels visible by the Help of Microscopes. A few Hours after these Vessels began to be distinguished by a Liquor contained in them. About the thirtieth Hour of the Incubation, these Vessels were of a somewhat greenish Colour. At the fortieth Hour they were

of a ferrugineous Colour, resembling that of wither'd Vine-Leaves in the Autumn, because the Congeries of all these Vessels was collected into one, which reaching to the Cicatrix, terminated in a certain Sinus which then first appeared. This Sinus was the right Auricle of the Heart, as afterwards appeared. And in this Sinus, which hung from the *Carina*, there appeared a manifest Pulsation; and a little after a small red Speck in that beating Body. Then this red Speck appeared diffused through the right and left Ventricles of the Heart; and a little after in the Duct which runs longitudinally along the *Carina*, or Rudiments of the Spine, and which was the Aorta. Hence we know, that red Blood may be prepared of a Matter which is not red, and that without the Admixture of pre-existent red Blood. This Redness derives its Origin from the beating Point or Speck, for it first appears where the Pulsation is; and there is red Blood present, before any Colour of Blood appears in the Rudiments of the Liver in the Chick. Hence we see, that the Opinion of the Ancients is false, who ascribed the Work of Sanguification to the Liver.

Perhaps, also, the Air (without which neither any Plant can vegetate, nor any Animal live) contributes to the first Formation of red Blood: For after the eighteenth Hour of the Incubation, *Malpighi* (as he informs us in his Treatise *de Ovo incubato*) observed the Cicatrix ascend to the obtuse End of the Egg, where the Air is lodged. In Adults the Chyle to be converted into Blood flows immediately through the Lungs, where, throughout the broadest Part of their Surface, it is in highly tender Vessels almost exposed to the open Air. According to the ancient Alchemists, the latent Food and Support of Life was contained in the Air.

But in adult Persons the Blood is prepared from the Aliments in a similar manner: For the lacteal Vessels receive the Chyle prepared in the Intestines, in the same manner as the Vessels of the Yolk received the White of the Egg attenuated by the Heat of Incubation. As the whole Chyle meets in one thoracic Duct, so in the Chick all these Vessels were united within the Amnion. The Heat of Incubation, the Motion of the Humours through the Vessels, the Force of the Heart, and the Action of the Air concurred within forty-eight Hours to the Production of red Blood in a Chick, which before had none of that kind. But in a sound adult Person the Chyle is converted into Blood in the Space of twenty-four Hours, as is evinced by the Observations of *Lower* and *Waleus*. The Heat of the Body, the Action of the Vessels and Heart, together with the Force of the Air in the Lungs, applied to the Chyle as it passes through them with the Blood, concur to the Transmutation of Chyle into Blood in Adults. But that such a Conversion is sooner performed in adult Persons, than in growing Chicks, seems to be owing to the far greater Action of the Vessels upon their Contents, the Respiration, and the superior Quantity of pre-existing red Blood.

But when these Causes producing red Blood in Adults, are in some measure defective, or act but slowly, red Blood is not produced, but a peccant and degenerating Liquor; as is obvious from what is commonly called the Green Sickness in Virgins, during which Disorder no red Blood is produced; but such a greenish Colour arises all over the Body, as was observed in the Vessels of the Yolk of the Egg, before any red Blood was formed.

Hence the Blood is not, as some imagine, propagated by seminal Force, but produced of a Matter not of the sanguineous Kind in a Body which as yet has no Blood. And as this Circumstance happens in the first Origin and Formation of Man, so it continues to the End of his Life.

When in human Creatures Blood is a forming from the Chyle, various and successive Degrees of Changes are observed: For the Chyle, a few Hours after Meals, is found conveyed to the Blood, tho' not assimilated. Hence, when after a liberal Meal Blood is taken from the Vein, besides the Serum and the red Part, there is a white, sweet, and chylous Part found fluctuating in the Blood.

In a few Hours the Chyle, conveyed with the Blood thro' the Vessels, is separated from the Blood by the Fabric of the Breasts, and affords Milk, which is of a different Nature both from Blood and Chyle; for in Milk there begins to be formed that Tendency to Concretion, which is already present in the Serum of the Blood, for it yields Cheese. But this Tendency to Concretion is never found in the Chyle. Hence we may artificially imitate the Preparation of Chyle in Emulsions, but never the Nature of Milk.

When a sound Woman for twelve Hours totally abstains from Meat and Drink, her Milk begins to be saline and yellowish. If she abstains still longer, nothing is found in the Blood taken from her Veins, but what (like the White of an Egg) is by means of the Fire concreted, which never happens in the Chyle.

Hence



Hence we may conclude that the Bodies of sound Persons are the Formers and Producers of their own Blood, in the same manner as any Plant, by its peculiar Fabric, prepares its Sap from the Juices of the fertile Earth and the genial Influences of the circumambient Air.

But in the human Body the Formation of Blood depends principally upon the Efficacy of the Circulation, by which the Vessels act upon their contain'd Fluids. Hence in the most robust Persons the Blood is redest, or rather almost black in consequence of its saturated red Colour, and is concreted almost the very Moment it is left in a State of Rest. And in acute Diseases, when the Circulation is increased, all the Parts are intensely red, and the Serum of the Blood is converted into a Scissile Mass. But in weak Persons in whom the Efficacy of the Circulation is far less, all the Parts are pale and languid, whilst the Blood is thin and hardly capable of Concretion. But when, in such Persons, by due Exercise and proper Remedies, the Circulation is augmented, the red Colour and the due Cohesion of the Blood return.

The increased Motion of the Blood thro' the Vessels is produced by more frequent and strong Contractions of the Heart.

After considering the Nature of the human Blood, we now come to investigate the Cause of its Motion and Circulation. Some celebrated Men have imagined that this Cause resided in the Blood itself; for having observ'd that, by the mutual Mixture of certain Liquors, violent Commotions were suddenly excited, they hence concluded that something similar to this happened in the Blood.

But when in the most violent burning Fever, upon the Rupture of a small Artery of the Nose, the Blood is discharged with an uncommon Impetus, and received, whilst as yet hot in a clean Vessel, it is forthwith in a State of Rest, and affords no Signs of an intestine Motion. Hence the Cause of the Blood's Motion is not lodg'd in itself.

But the muscular Action of the Heart, by a strong Force, expels the Blood contained in its Cavities, thro' the Arteries, which immediately after, when the Action of the Heart ceases, by their Elasticity and muscular Force, convey the Blood still farther. These are the true and only Causes of the Circulation of the Blood. But the Beginning or Principle of this Motion is contained in the Heart; for when the Arteries are so contracted that their Diameters are smallest, they would remain in a State of Rest and Inaction, unless they were again dilated by the Blood expelled from the Heart. The muscular Action of the Heart is, therefore, the Cause of the Circulation of the Blood, and when that ceases all the Fluids become stagnant.

If therefore the Action or rather Contraction of the Heart (for in the Diastole the Heart is not active but passive) is rendered more frequent and strong, the Cause of the Circulation will be augmented; for it is not sufficient that the Heart should move frequently and contract itself, since near the Death of any Patient its Contractions are so frequent that they cannot be numbered, whilst in the mean time the Circulation begins to fail because scarcely any Blood is expell'd from the Heart.

But 'tis also requisite, that it should more forcibly contract itself that all the Blood contained in its Cavities may be expelled; for a strong Contraction of the Heart is that which expels all its Contents, whilst the weakest is that which expel none at all. The intermediate Degrees are weaker Contractions of the Heart.

The Contractions of the Heart are rendered more frequent and strong, first by the Brain and Cerebellum promoting a too copious Expression of the nervous Fluid as is observable in Persons under the Influence of any Passion or rack'd with the Agonies of Pain. Secondly, by an Irritation of the Heart, in consequence of an accelerated Motion of the venous Blood, produced either by Friction or the Action of the Muscles; or by some acrid, aromatic, saline, and alkaline, purulent, ichorous, or putrified Substance lodged in the Mass of Blood; and sometimes by a Species of Contagion, Plague or Poison; and when this happens, the Disorder, cannot from the Discoveries hitherto made, be distinctly explained.

We now come to consider those Things which, from Experience, we find capable of exciting and increasing the Motion of the Heart.

1. The Heart has all the Properties of a true Muscle, and is furnished with those Parts which in other Muscles are subservient to their Motions. When the Nerve distributed

to any Muscle is destroy'd, the Action of that Muscle is of course abolish'd, when the Brain is compressed by the Effusion of any Humor, the Action of all the Muscles subservient to voluntary Motion ceases. If, by any Cause, a too brisk Reflux of the Spirits thro' the Nerves into any Muscle is produced, the Action of such a Muscle will be increased even to the highest Spasm. But large and numerous Nerves are distributed to the Heart, which, however, has not a quick and acute Sensation in consequence of these Nerves. The other Muscles of the Body, when fatigued by excessive Motion, are painful, whereas in acute Fevers, when the Heart has for many Days been agitated by an intensely brisk Motion, it perceives no Pain. Now all the Causes which can produce a quicker Motion of the Spirits thro' the Nerves of the Heart, also increase and augment its Motion.

Now that the Passions of the Mind principally and effectually produce this Effect is universally acknowledged, tho' none has explained the manner in which it happens. The best-natured Man when affronted has such a Change induc'd on the State of his Mind as produces an Alteration in all the Parts of his Body; for the Contractions of his Heart immediately become quicker and stronger, his Pulse large and vehement, his Heat is increased, his Face becomes tumid, his Eyes sparkle, and a burning Fever is sometimes excited, which proves so violent as to determine in Death.

Pain may also so change the whole Brain as to produce a Delirium, after which no farther Pain is felt, or a perfect Syncope, which puts an End to the most racking Tortures. Since therefore Pain is thus capable of changing the common Sensory, it may also affect the Nerves distributed from it. Intense Pain rarely continues long without producing a Fever, that is a quicker Contraction of the Heart, even in Disorders very different from a Fever, such as the Gout for Instance. Hence *Galen* in his Treatise *De Pulsibus ad Tyrones*, Cap. 12. informs us, that "Pain when small and only beginning renders the Pulse more large, vehement, quick and frequent; but when it is increased and becomes so violent as to injure the vital Strength, it renders the Pulse more small, languid, quick and frequent."

2. *As for the Irritation of the Heart;* Besides the Causes of Motion which the Heart has in common with the other Muscles of the Body, there is in the Heart a singular and peculiar Property, which may be called Irritability, or a Capacity of Irritation; for when the Influx of the Spirits thro' the Nerves into the Fibres of the Heart, and the Motion of the Arterial Blood, cease after Death, the Motion of the Heart may be restored by blowing thro' the Veins, or injecting tepid Water into them. The Heart, also, when cut from all the Vessels with which it coheres, retains its Motion for some time, and after it has been in a State of Rest for several Hours, when it is cherished with Heat and prick'd with a Pin, it again begins to move. Physiologists have in a subtle manner explain'd, why the Heart should become alternately Paralytic, and be again contracted, as it were, by an instantaneous and sudden Spasm, and how the Cause producing the Systole of the Heart should every Moment perish, and be immediately after renew'd; and their Accounts of these Phenomena they have deduced from the Structure and Situation of the Parts. But the Heart, when taken out of the Body, and no longer adhering to any Vessels, continues the same Motion, and frequently for a considerable time.

*As for the Acceleration of the venous Blood;* When in consequence of any violent Passion, or the seeing of any horrid and frightful Object, by any tender Girl, there is an absolute Rest of the Heart, if cold Water is sprinkled on her naked Body, the Parts being contracted by the Cold, convey the venous Blood to the Heart, by which Means its Motion is restor'd. Thus *Homer*, in the Fifth Book of his *Iliad* tells us, that when *Sarpedon* was so excessively wounded as to fall into a Deliquium, he was restor'd by the Blowing of the North-wind on his Body, because the Veins were constricted by the Cold. Hence all these Things which accelerate the Motion of the venous Blood to the Heart, also augment its Motion. Thus an intensely burning Fever may be excited by excessive muscular Motion, and too strong Frictions. See *FIGURA*.

*As for acrid and other unfriendly Substances lodging in the Mass of Blood;* All the Humours of the human Body, when sound, are mild; since the Blood of a sound Person, when put into the Eye, produces no Pain; and when it is in this State, its Circulation is highly equable. But as soon as acrid Substances are mixed with the Blood, its Motion through the Vessels is, by the Irritation of the Heart, increased, and a Fever produced, which either expels these acrid and unfriendly Substances from the Body, or so subdues them, that they no longer



longer prove injurious. Nor is it of any Importance of what kind this Acrimony is, since they all produce the same Effects, and only differ with respect to the Degrees and Duration of their Actions. In aromatic Substances, the Acrimony contained in a tenacious Oil, is not easily dislodg'd and thrown off. Thus, when large Quantities of Pepper are imprudently taken for the Cure of intermittent Fevers, a mild Tertian is often changed into a burning Fever. The Person who at Dinner uses too large a Quantity of Sea-Salt, will, in the Afternoon, become feverish, and afflicted with Thirst, till by drinking copiously, that Salt is washed off. Vinegar itself, which in putrid Fevers is so efficacious, excites a Fever when too liberally used. When an Imposthumation concealed in the internal Parts collects Pus, this Pus, when resorbed and mixed with the Blood, daily excites a Fever, which gradually preys upon the Body, and is called an hectic Fever. When this Pus, by a long Retention, is changed into a thin Ichor, it becomes more acrid; and when resorb'd, produces more terrible Misfortunes.

Corrupted Bile lodged about the Præcordia, or the putrid Gore of the corrupted Liver, excites violent Fevers, which can never be cured, unless that putrid Fomes could be removed.

But in all these Cases the Acrimony may be discovered by the Senses; tho', at the same time, there are other very surprising stimulating Substances, which can be reduced to no known Species of Acrimony, but yet disturb the Body in all its Functions.

The Contagion of the Small-Pox, by its subtle Miasma, which entirely eludes our Senses, infects the soundest Person, upon which is produced a violent Fever, which in a few Days fills all the external and internal Parts of the Body with a variolous Pus. And in this Pus, by the Disorder formed of the soundest Humours, there is the same Force of propagating the variolous Contagion infinitely, as is obvious from the Method of Inoculation, in which a small Drop of variolous Pus is put into a crude and recent Wound. But none has hitherto been able to explain the Nature of this Stimulus, or demonstrate the Method in which the sound Humours, chang'd by the variolous Contagion, assume a poisonous Nature, and become capable of multiplying the Contagion almost infinitely.

The Kind of Plague peculiar to each Species of Animals, rarely happens to more than one Species at a time. When the Plague raged in *Europe* among Oxen, even those Persons who used the Flesh of the infected Animals, remained free from every Degree of the Contagion. The most skilful Physicians, after a sedulous Investigation of the Nature of this terrible Disorder, ingenuously confessed, that they knew nothing with respect to the Cause, since its Effects were only subjected to the Senses. The pestilential Virus remains inactive upon Linnen, Leathern, or Woollen Cloths; and upon open and porous Woods, till being applied to the human Body, it becomes active, and by multiplying the Contagion, diffuses itself every where. In this Case, how surprisingly all the Parts of the Body are disturb'd, and what violent Fevers are excited, may be seen in *Diemerbroeck* and others, who have wrote concerning the Plague.

The surprising History of Poisons evinces, that in some Liquors of poisonous Animals, there are such Stimuluses as have no Acrimony observable to the Senses; but yet, by an inconceivably quick Action, they injure almost all the Functions, and excite violent Fevers. We shall only instance in the Poison of the Viper. The celebrated *Redi*, relying on the Observations and Candour of *Charas*, tasted the yellow Juice adjacent to the Gums of the Viper, and found its Taste to resemble that of the Oil of Sweet-Almonds. Whereas a small Quantity of the same Juice, adhering to an inconsiderable Wound made by a Bite in a Person of Distinction, who handled a Viper imprudently, a few Minutes after produced the most violent Symptoms; so that the Patient hardly escap'd, after numerous Attempts for his Relief.

An increased Motion of the Blood through the Vessels produces a greater Force of the Blood propelled, upon the receiving Vessels; a greater Resistance in the Vessels to the Blood; a strong Compression of the Blood; a violent mutual Attrition of the Vessels and Blood; a strong mutual Attrition of the Parts of the Blood; a greater Heat in all the Parts of the Body; an Exsiccation of the Blood, in consequence of the Dissipation of its most aqueous Parts; an inflammatory Viscidity of the Blood, by which it is easily disposed to Concretion; a Resolution of the Blood into Salts, and volatile and acrid Oils; an increased Largeness of the Vessels at their Beginnings; an Impulse of the thick Fluids into the minute Vessels, which produces in them Obstructions, De-

structions, Inflammations, Suppurations, Gangrenes, a Sphacelus, a Scirrhus, and the infinite Misfortunes which may succeed them.

In this Paragraph are considered those Effects on the Solids and Fluids of the human Body, which depend upon an increased Motion of the Blood.

*As for the greater Force of the Blood propelled, upon the receiving Vessels;* The Arteries are always full; when, therefore, the contracted Heart expels the Blood contained in its Cavities into the Arteries, these latter must be dilated; or such a Quantity of Blood ought to be expelled through the Extremities of the Arteries, as is forced from the Heart into the Arteries. But all the Arteries, except those known by the Name *Coronary*, are dilated in the very Moment at which the Heart is contracted. Hence almost the whole Action of the Heart is employed in dilating the Arteries; and by this Force the Sides of the Arteries are so pressed, that they recede from their Axis, and have all the Fibres constituting their Sides distracted. But as we have already shewn, that an increased Motion of the Blood is produced by a more strong and frequent Contraction of the Heart, 'tis obvious, that the Force by which the Sides of the Arteries are compelled to recede from their Axis, is then increased in a Proportion compounded of the increased Strength, and Frequency, of the Contractions of the Heart.

*As for the greater Resistance of the Vessels to the Blood;* The Arteries, when distended, are in a State of Violence. Hence, by the Elasticity and muscular Force of their Fibres, their Sides endeavour to approach nearer their Axis; by which Means they repress the distending Blood: For unless the Arteries contracted by their own Force, expelled the distending Blood, the Heart could not, in the following Systole, expel the whole Blood contained in its Cavities into the Arteries, as yet distended; the Blood would be gradually accumulated in the Cavities of the Heart, and the Circulation suffocated. The stronger, therefore, the Action of the Heart distending the Arteries is, the more strongly will that Force act by which the Arteries endeavour to contract their Cavities; and the oftner, in the same Space of Time, the Heart is contracted, the more frequently will the contracted Arteries re-act on the distending Blood.

*As for the strong Compression of the Blood;* The Blood contain'd in the Arteries is always, as it were, between two Presses; for when the Arteries are dilated, the Contraction of the Heart forces the Blood from the Base to the Apex of the Artery; whilst, in the mean time, the narrow Extremities of the Arteries make the greatest Resistance. When the Arteries are contracted, the Valves about the Basis of the Arteries in the Heart make a Resistance; and there is the same Resistance at the Extremities of the Arteries; hence in both Cases the Blood contained in the Arteries is compressed. But since the constituent Parts of the Blood are flexible, and capable of Compression, as we have already observed, if the compressing Causes, that is, the Action of the Heart and Arteries, are increased, it necessarily follows, that the Compression of the Blood must become stronger.

*As for the strong mutual Attrition of the Vessels and Blood, and of the Parts of the Blood with each other;* When the Blood is forced from the Heart, it acts upon the Sides of the incurvated Aorta; and this Direction of the Blood is resisted by the strong Sides of the Aorta, and the Blood contained in its Cavity. Hence no Particle of Blood expelled from the Heart into the Aorta, for two Moments, preserves that Direction of Motion which it had when it was expelled from the Heart. Besides, the Aorta is conical, or wider at the Base, but gradually becomes narrower. But since the Direction of the Blood expelled from the Heart into the Aorta, is in Lines perpendicular to the Basis of the Aorta, it must necessarily happen that the Particles of the Blood will strike against the Sides of this conical Canal; and in their Resilition thence, will meet other Parts moved in a different Direction. Hence there is a perpetual Attrition of the Parts of the Blood with each other, and with the Sides of the Vessels. Hence, also, as the Parts of the Blood are flexible, their most considerable Angles being destroyed by the perpetual Attrition, they acquire a spherical Figure. But by an increased Motion of the Blood through the Vessels, this Attrition is augmented in the same Proportion.

*As for the greater Heat of the whole Body;* From this mutual Attrition of the Parts, and on the Sides of the Vessels, arises Heat. This is sufficiently certain, because as soon as the Blood is in a State of Rest, all its Heat is lost, and the Body is gradually reduced to the same Degree of Coldness with the common Atmosphere. When the Motion of the Blood is increased by violent Exercise, or a Fever, the



the Heat is increased; but weak Persons, the Circulation of whose Blood is languid, are always cold.

Hence we see the Truth of that Assertion of *Hippocrates*, who, in the End of his Book *de Corde*, informs us: "That the Blood is not naturally hot, but becomes so."

*As for the Exsiccation of the Blood, in consequence of the Dissipation of its most aqueous Parts*; An increased Heat always dissipates the most moveable Parts of any Fluid; but, as we have already shewn, a greater Heat is produced by an increased Motion of the Blood through the Vessels. The whole internal and external Surfaces of the Body have exhaling Vessels, which secrete from the Blood, and dissipate an highly subtil Liquor. An increased Application, therefore, of the Blood to these Organs, will produce a proportionably greater Secretion. Hence it is, that in all Diseases accompanied with an increased Heat, the Body is dried. Hence *Hippocrates*, in *Lib. 1. de Morbis*, informs us, that "They who die of burning Fevers, are taken off by Dryness."

*As for the inflammatory Viscidity of the Blood*; There is in the Blood of the soundest Person a natural Propensity to Cohesion, in consequence of which it is spontaneously concreted when taken from the Veins, and left in a State of Rest. This Cohesion is increased by the greater Heat; since by that Means the aqueous diluting Part is dissipated, and the Force compressing the Blood strengthened. We have already shewn, that by an increased Motion, the aqueous Part is dissipated, and the Heat in like Manner increased. But the Action of the Vessels on the Blood, is a true Compression of the Blood they contain. Hence, since, by an accelerated Motion of the Blood, the Action of the Vessels on the Blood is increased, it is obvious, that all those Causes concur to produce this increased Action of the Vessels on the Blood, which contribute to its Concretion. Then arises the *Phlegma Phlegmonodes*, which is entirely distinct from a languid, cold, and mucous Concretion. In this Case it is called an inflammatory Spissitude, arising from a strong Compression of the Principles of the Blood to each other. The Elements, or component Parts of the Blood, are observed to be spherical, or nearly so. Hence they touch one another in few Points. But when, by a too strong Pressure, their Figure is changed, and the thin aqueous Part, in which they floated, expressed, they come into more numerous Points of Contact, and are by that Means concreted. Hence arises that coriaceous Toughness observable in the Blood of pleuritic Patients.

*As for the Resolution of the Blood into Salts, and volatile and acrid Oils*; The State and Condition of the Salts and Oils of the human Blood, are best known from the Urine; which, as it is the true Lixivium of the Blood, washes off the already form'd Salts and Oils, which are of an acrid, and consequently an hurtful Nature. It evidently appears, that the Urine is the more acrid and fetid, the stronger the Circulation of the Blood is. In weak Persons the Urine is pale, almost without any Smell, and not very salt. Whereas, in robust Persons, habituated to Exercise, the Urine is redder, more fetid, and highly salt: An increased Motion, therefore, of the Blood through the Vessels, renders the Salts of the Blood more acrid and volatile; and its Oils more attenuated, but at the same time less mild. Hence again arise new Stimuluses increasing the Circulation, by the Increase of which they were originally produced; and thus the Effect of the Disease increases the Disease.

*As for an increased Largeness of the Vessels at their Beginnings*; The Force of the Heart expelling the Blood into the full Arteries, is the only Cause which dilates these Arteries. When, therefore, this Action of the Heart increases, the Dilatation of the Arteries will, in like manner, be augmented. But this Dilatation will be the greater, the nearer the Artery is to the Heart: Therefore the Beginnings of all the Arteries will be more dilated; whereas this dilating Force cannot with so great Efficacy be conveyed to their Extremities.

*As for the Impulse of the gross Fluids in the minute Vessels*; The coarsest Part of the Blood is observed to be a red Globule, which naturally can be only contained in the largest Vessels. The next largest Particle of the Blood may enter a smaller Vessel, which, in consequence of its Smallness, excludes the red Globules, but admits all such as are smaller. The same holds in the other Series of decreasing Vessels; and Health seems principally to consist in this, that proportional Fluids remain in their proper and respective Vessels. When, therefore, by an increased Motion of the Blood through the Vessels, the Beginnings of the Arteries of the next succeeding Series are too much distended, grosser Parts, which ought not naturally to be contained in these Vessels, may enter them. Thus, for instance, when the Beginning of a serous Artery, arising from an Artery containing red Blood, is di-

lated too much, the red Blood will enter this serous Artery. And that this really happens, is certain from Experience. If a sound Man runs violently, his whole Face will begin to grow tense, and an excessive Redness will appear in such Parts as were not naturally red. The whole Tunica Adnata of his Eye begins to have its Vessels filled with red Blood, whereas they never in a natural State contain red Blood. After violent Exercise, or Riding in a Chariot in rough and uneven Roads, the Blood passes through the dilated renal Vessels, and a Discharge of bloody Urine by that Means is produced, which, however, is easily cured by Rest alone.

*As for Obstructions and Destructions of the minute Vessels*; An Artery in its Course gradually becomes narrower and narrower, till at last it is almost only capable of transmitting one Molecule of Blood. This evidently appears upon Examining the Circulation of the Blood, in the pellucid Parts of Animals, by the Assistance of Microscopes. But in a particularly beautiful manner, when the Lungs of a live Lizard appearing through a Wound made on Purpose, are viewed with a Microscope. For in this Case it evidently appears, that about the Extremities, or narrowest Parts of the Arteries, all the Molecules of the circulating Fluid are changed into an oblong cylindrical Form, and so transpressed through the narrow Channels of the Arteries. When, therefore, for instance, a serous Artery, dilated at its Beginning, receives any Portion of red Blood, this Blood cannot pass through its most narrow Parts. Hence such an Artery will be obstructed; and since the Fluids propelled by the vital Motion, act upon the obstructed Part, such a tender Vessel must be easily destroyed.

*As for Inflammations, Suppurations, Gangrenes, a Sphacelus, a Scirrhus, and all their Consequences*; Whilst the red Blood stagnating in the minute Canals is compressed, and an Attrition of it produced by the Action of the Blood which succeeds, and is generally put into a violent Commotion by the concomitant Fever, the Disorder is called an Inflammation, which must, for this Reason, most frequently arise from gross Fluids, propelled into Vessels naturally too small for their Admission. But when an Inflammation is once produced, all its Effects succeed: For when the infarcted Vessels, together with the impacted Humour incapable of Circulation, are acted upon by the vital Force, and being dissolved, degenerate into a pinguinous, white and equable Humour called Pus, a Suppuration happens. If, in consequence of a sudden Rupture of the Vessels, the Circulation of the vital Humours through the Part affected is totally destroyed, a Gangrene, or Mortification of the Part is excited; and when this Disorder seizes the whole Substance to the Bone, it is called a Sphacelus. If about glandular Parts, an Inflammation arises, a hard Tumor without Pain, but not to be resolved without the greatest Difficulty, is produced, and distinguished by the Name *Scirrhus*.

From a due Consideration of these Circumstances, it evidently appears, that an increased Circulation of the Blood may produce numberless Disorders. All the Humours of the Body, by an increased Motion, and an augmented Heat arising from it, may be totally changed into a morbid State, by the stronger Pressure, the Coagulum induced by the greater Heat, and the augmented Acrimony. There is a greater Attrition, and often a Rupture of the solid Parts produced. The gross Humours, which cannot penetrate through the narrowest Parts of the Vessels, enter the dilated Vessels: and if we consider that all these Disorders may happen in all the Parts of the Body, 'tis obvious that numberless Diseases may arise from this single Cause.

An increased Circulation of the Blood may therefore be known from an acquaintance with its Causes and Effects already enumerated, but especially from the quickness and hardness of the Pulse; the velocity and difficulty of Respiration; and the intense Heat.

'Tis of great Importance in the Practice of Medicine, to know whether the Velocity of the Circulation is too great or not. If the Causes of an increased Circulation are present, and the Effects of a too violent Motion of the Humors observable, the State of the Patient is no longer dubious. There are, however, some infallible Signs which demonstrate the Excess of the Circulation, such as

*The Velocity and Hardness of the Pulse*. The Celerity of the Pulse is a Sign, that in the same Time the Heart is oftener contracted; and the Hardness of the Pulse denotes the plenitude of the Arteries, and is a Proof of a Blood highly compacted, dense, and in consequence of its inflammatory Viscidity, with Difficulty capable of passing thro' the Extremities of the Vessels. The Celerity of the Pulse alone without Hardness, denotes that the Heart is oftener thro' not



more strongly contracted; for near the Death of any Patient the Pulse is very quick, tho', at the same time, small. Whereas the Hardness of the Pulse alone without Celerity rather denotes a Suffocation of the Circulation, as is observable in highly plethoric Patients.

*An Increased Circulation is also known from a quick and difficult Respiration.* The whole Blood expell'd from the right Ventricle of the Heart must pass thro' the Lungs before it can come to the left Ventricle. But the right Ventricle of the Heart is not by its muscular Force alone able to propel the Blood thro' the narrowest Parts of the Pulmonary Artery, 'tis also requisite there should be a Dilatation of the Lungs by Inspiration, in order to make a quick Passage for the Blood expell'd from the right Ventricle. The more frequently and strongly, therefore, the right Ventricle contracts itself in the same Time, the more frequent and strong the Respiration will be. Hence, as soon as by Running or any other Exercise, the Motion of the Blood thro' the Vessels is increased, the Respiration is proportionably augmented and perform'd with greater Difficulty. Thus the Respiration is increased only by an augmented Velocity of the Blood passing thro' the Lungs. But when by this increased Motion an inflammatory Spissitude begins to be produced, the Respiration will be far more laborious and quick; for the Incapacity of the Blood for circulating, first discovers itself in the Lungs. Hence 'tis that in acute inflammatory Disorders a quick and difficult Respiration is so bad a Sign.

*An increased Circulation is also known by the excessive Heat of the Body.* So long as there is a free Passage thro' all the Vessels, an increased Celerity of Motion in the Fluids also augments the Heat of the Body, as we have already shewn. But when Blood rendered incapable of Circulation cannot reach the Extremities of the Vessels, a Coldness of the Extremities is produced. But at that very Time there is a burning Heat about the vital Viscera, as happens in the worst burning Fevers. And this is by *Hippocrates*, in his *Prognostics*, and other Parts of his Works, generally reckoned among the Mortal Signs.

The Remedies, therefore, best calculated and most efficacious for allaying an excessive Circulation, are such as diminish the Frequency and Force of the Contraction of the Heart.

These simple Disorders are first to be consider'd in an abstracted Light; for which Reason 'tis here supposed, that nothing is changed in the Body, but only that the Circulation of the Blood is augmented. Every thing, therefore, is a Remedy for this Misfortune, which can remove the proximate Cause of the increased Motion of the Blood. But this Cause is a too quick and strong Contraction of the Heart, so that every thing is a Remedy which can produce a slower and weaker Motion of that Organ. But such a Remedy must act either on the Spirits which move the Heart, upon the venous and arterial Blood convey'd into it, or upon those stimulating Substances which by their Irritation produce a stronger and quicker Contraction of the Heart.

Some of these Remedies have an Influence on the Mind, and others on the Body.

We have already observed, that only a Change in the Disposition of Mind, may in the soundest Person so increase the Motion of the Heart, as to produce a violent Fever. And unless the Physician can then remove that Change of Disposition, other Remedies will be of no Service. But every thing which produces this Effect acts upon the Mind without inducing any change on the Body. Thus when a Man in a violent Passion is frighted, his Passion is removed without any Change induced on his Body, whilst only the State and Disposition of his Mind is altered. The other Causes removing the material Causes of an increased Circulation act only on the Body.

The former of these Remedies are such as allay violent Passions by Reasoning; excite the contrary Passion, or divert the Person under its unhappy Influence.

*Violent Passions are sometimes removed by Reasoning.* We are conscious to ourselves, not only that we think, but also that we think on Objects different from the Act of Thinking itself. And if these Objects are only perceived by an ordinary Perspicuity of Mind, they affect us but little, and only retain the Soul in a kind of simple Contemplation. This is sufficiently evinced in profound Mathematicians, who sometimes so spend their Lives in thinking upon Mathematical Subjects, that they are but little affected with other Objects. We have also a particular kind of Perception, which tho' we cannot communicate it to others, yet

makes as strong and ardent an Impression upon us as Truth itself. Thus upon tasting a delicious and grateful Wine, an Idea is excited in the Mind, which we can no otherwise explain, than by saying that it is pleasant. But that this Idea is pleasant, is so evident, and affects the Mind so strongly, that no Truth can make a greater Impression upon it. On the contrary, if any Person tastes a rotten Egg, he so abhors it that he would almost submit to any Thing rather than taste any more of it. Thus the Affections of the Mind, together with its Perception, almost by an absolute Necessity, carry the whole Mind along with them, so as to desire to render the pleasant Idea permanent, and to remove or destroy that of the displeasing Kind.

But this Pleasure or Disgust accompanying any Idea, not only differs from the Idea itself, and the Principle of Thought, but also disturbs the whole Train of Ideas, influences the Will, and as it were destroys Liberty. Since it necessarily determines us to like and dislike. This singular Phenomenon has induced Philosophers to call the Affections of the Mind Passions; and justly, because we are not their Masters, but their obsequious Slaves, since we often approve of what is good and laudable, and under an immediate Sense of its Worth pursue its fatal Opposite.

Philosophers have greatly erred in endeavouring to destroy this Pleasure or Disgust which accompanies the Perception of Ideas; for no more is requisite of Mankind, than that they should govern the Affections of their Minds by Reason. But this latter is often so weak, that it cannot subdue the former. Hence Resolution and Perseverance become necessary, that Reason fortified by an Habit of Opposition, may at last come off triumphant; for certainly the wisest and best of Men can hardly conquer the exorbitant Passions of their Minds, by the most refin'd and exalted Suggestions of Reason and Religion.

*Violent Passions are also removed by exciting the opposite Affections.* The wisest Legislators, conscious that human Society could not be govern'd by Reason alone, have proposed Rewards and Punishments. The Dread of Punishment is sufficient to stifle the dire Effects of Passion, when the most beautiful moral Precepts are of no Use. 'Tis, therefore, of great Importance to know the opposite Affections of the Mind; Anger is suppressed by violent Dread, whilst the most timorous Man is render'd bold by Anger. If we observe the Changes induc'd on the Body under these two contrary Passions, they will be found intirely opposite.

In an angry Person there forthwith arises a stronger and quicker Contraction of the Heart. The Pulse becomes fuller, stronger and quicker, and all the Parts, even in the most extenuate Persons, become tumid and expanded. A greater Heat arises in the whole Body. Almost all the Muscles become tense, the Eyes are stern, prominent, sparkling, and as it were cover'd with Blood, whilst Menaces and Reproaches are alternately pour'd forth. *Homer*, who every where paints Nature in her truest Light, in *Lib. I. Iliad*. compares the Eyes of *Agamemnon* when angry, to sparkling Fires. In the same Book, *Achilles*, when represented as enraged at the Loss of his beloved *Briseis*, is said to have his Eyes sparkling in such a manner as to strike Terror in all who beheld them. *Achilles*, in his Answer to *Ajax*, persuading him to take Arms, tells him that his Heart was become tumid with Anger. And *Achilles*, when viewing the Arms, brought by his Mother *Thetis*, is said to have immediately fallen in such a Passion, that his Eyes struck Terror, and appeared like Sun-Beams under his Eye-brows.

A Man suddenly struck with Terror, becomes pale and cold, whilst his whole Body is contracted, his Pulse is quick, but small and unequal; he is seized with a Palpitation of the Heart, and a violent Oppression about the Lungs, and a Sighing. The whole Strength of his Limbs is destroy'd, his whole Body trembles; and sometimes Persons in this Condition become stiff like Statues, whilst the trembling Accents die upon their fault'ring Tongues. Hence *Homer* gives the Epithets *cold* and *pale* to the Passion of Fear. And when *Alexander* flies from *Meneclaus*, rushing in upon him, Trembling seized his Limbs and Paleness his Cheeks.

Hence it appears that contrary Affections of Mind produce opposite Effects in the Body, and consequently that one Affection of the Soul may be a Cure for another. The same might be demonstrated by comparing other opposite Affections.

*Violent Passions may also be remov'd by diverting the Person under their Influence.* The human Mind has a surprising Faculty of affixing the Ideas it forms to certain Signs merely arbitrary, whilst there is no manner of Similitude between these Signs and the Ideas, tho' afterwards upon seeing such Signs, the Idea before affixed to them is rendered present to the Mind. By a few Letters variously combin'd, Ideas are excited in our Minds, which we had some Years

before,



before, though the Remembrance of these Ideas had been entirely lost, unless these arbitrary Signs had preserved them. The same holds true with respect to the Affections of the Mind. Thus *Æneas*, when beginning to yield to the Intreaties of vanquished *Turnus*, when he views the Belt of *Pallas*, whom that Warrior had killed, is transported with incredible Rage. This Accident is beautifully described by *Virgil*, in the twelfth Book of his *Æneid*.

————— *furiis accensus, & ira*  
*Terribilis : Tunc hinc spoliis indute meorum*  
*Eripere mihi ! Pallas te hoc vulnere, Pallas*  
*Immolat, & poenam scelerato ex sanguine sumit.*

When, therefore, this Pleasure or Disgust accompanies the Ideas renewed by these Signs, more intense Affections of Mind are excited, and may by this Means be, at last, rendered perpetual. Then the almost infinite Variety of the Thoughts of the Mind is destroyed, and all its Powers employed upon this one Subject. The Will, which before could chuse an infinite Number of Objects, is now intensely fixed upon one. This Species of Disorder is called a Delirium; but if it is very violent, 'tis called Fury. If it is accompanied with a Fever, and an Agitation of the Humours, it is called a Phrenitis. If these Symptoms are absent, it is called a *Mania*; and if the Disorder is attended with a Neglect of every Thing, it is called *Foolishness*.

Hence skilful Physicians, without the Knowledge of the Patient, remove all those corporeal Marks which renew such Ideas, whether by the Intervention of the Senses, or of the Memory. Other Objects presented to them, and capable of exciting other Ideas, which gradually lessen and diminish the too strong Impression made by a particular Object or Train of Ideas, are said to divert the Patient. For this it is sufficient, that the Thoughts be in such a manner chang'd, that the same Idea, by a long Continuance, may not afterwards possess the whole Mind, and become indelible.

But when violent Affections of the Mind disturb the whole Body, and irritate the whole nervous System, which frequently happens in hysteric Disorders, then we have recourse to such Medicines as sooth the Spirits, and, for a time, totally abolish the Action of the Brain. Such a Relief is principally afforded by the Juice of the Poppey, which, when exhibited in a small Quantity, induces the most pleasant Sensation imaginable; and, like the celebrated *Nepenthe* of *Helen*, creates a perfect Forgetfulness of all Misfortunes. A considerable Dose of it induces Sleep, and an excessive Quantity an Apoplexy. The Use of Wine, in a Person not much accustomed to it, produces the same Effects, excites uncommon Cheerfulness, allays violent Passions, and, at last, induces Sleep, which puts an agreeable temporary Period to all Misfortunes.

The other Medicines proper for allaying an excessive Circulation of the Blood, respect the Body, and act by a Rest of the Muscles, a Relaxation of the Veins, by correcting Acrimony, by diluting, by obtunding, and by removing the Causes of the Pain.

*As for a Rest of the Muscles*; One of the Causes of the Motion of the Heart, is the Influx of the venous Fluid into the Cavities of the Heart, as we have already observed. But the Motion of the venous Blood to the Heart is accelerated by the Motion of the Muscles; for most of the Veins situated on the Surface of the Body, lie upon the Muscles. Hence they are compressed by the Muscles, when become turgid in acting; by which means the Blood contained in the Veins is conveyed towards the Heart, because the Direction of the Motion of the venous Blood is from the Apex to the Base. Besides, when the Muscles act, they become pale; because all their Blood is expressed, and at that time is quickly conveyed through the Veins to the Heart. Hence the Circulation of the Blood is greatly increased by muscular Motion. Surgeons are sufficiently apprized of this, who, if upon opening a Vein, the Blood is slowly discharged, order the Patient to move his Fingers; upon which it is immediately more quickly and copiously discharged. Hence the ancient Physicians, though unacquainted with the Circulation of the Blood, in all Disorders accompanied with an excessive Motion of the Fluids, ordered the greatest Rest, removed all Objects capable of affecting the Senses strongly, and enjoined that the Patient should be lodged in a dark Room remote from all Noise.

*As for a Relaxation of the Veins*; In highly acute Disorders, in which there is the greatest Circulation of the Blood, it is always observable, that the greatest Quantity of Blood is lodged in the arterial Vessels, whilst a Depletion of the Veins is, by that Means, produced. On the contrary, in languid, slow Disorders, in which the Circulation is defective, the

Veins, and all the Cavities of the Body, are filled, whilst the Arteries are emptied; a Relaxation, therefore, and Impletion of the Veins, accompany a diminished Circulation of the Blood. Besides, the relaxed Veins being more easily distended by the Blood impelled from the Arteries, must also contain more Blood. A smaller Quantity of Blood will, therefore, return to the Heart, and by that means one of the principal Causes of the Motion of the Heart will be diminished. The Impetus of the Blood forced from the Arteries into the Veins, is, also, more retarded, because there is, in the Veins, a larger Quantity of Fluids to be moved; and for both these Reasons the Velocity of the Circulation is diminished.

But since, as is observed under the Article *FIBRA*, any Part of the Body may be relaxed, this End is best obtained by a Vapour-Bath applied to the Surface of the Body; whilst the same Intention is, also, pursued by proper Clysters, emollient Decoctions, and Aliments of a relaxing Quality. This Method was universally used by *Hippocrates* in acute Diseases.

*As for a Correction of Acrimony*; The Degrees of Acrimony, when known and reduced to their proper Classes, may be removed by Art, provided the Viscera are as yet sound. Thus an alkaline, acid, or aromatic Acrimony are pretty easily removed. But when such poisonous stimulating Particles, or contagious Miasmata, not to be discovered by the Senses, but only known from their Effects, are the Causes of an increased Circulation, then the healing Art becomes defective. When that highly-poisonous Animal, known by the Name of a Rattle-Snake, bit a sound Girl, as we are informed by *Louis Feuillée*, in *Journal des Observ. Physiques, Mathemat. et Botan.* soon after Death ensued, and though the Physician was present, he could afford her no Relief; and when, a few Hours only after her Death, they attempted to remove her Body, the putrid and corrupted Flesh was separated from the Bones. When the soundest Man is infected with the variolous Contagion, which is so subtle as to elude the Senses, all the Parts of his Body are disturbed, and a violent Fever is excited, which so surprizingly changes all the Humours of the Body, that within fourteen Days all the Parts of the Body, whether internal or external, are almost dissolved into a gangrenous Gore. If, in the Beginning of the Disorder, this Stimulus could be rendered inactive by a proper Antidote, no bad Symptoms would ensue. This is that *τὸ δεινόν*, that preternatural and incomprehensible Quality in Diseases, which so frequently baffles the Efforts of Art, and is the Reason why so often Physicians cannot check the excessive Motion of the Fluids. All that Art can do in this Case, is to weaken the Principle of Life, by which alone Poisons are rendered active; since they produce no Effects upon a Carcase. Then the Poison is to be obtunded by the Exhibition of the most emollient Substances; and washed off by diluting Liquors drank in large Quantities.

*As for removing the Cause of the Pain*; In a Luxation of any Joint, the most violent Pain is produced. And this Pain brings on a Fever, not to be cured till the luxated Bone is reduced, and the Pain by that Means remov'd.

The Anodynes, Narcotics, and Hypnotics, proper for removing Pain in Disorders arising from an excessive Circulation, are specified under the Article *VULNUS*. *Pan-Soriten. Comment. in Aph. Boerhaave.*

**SANGUIS DRACONIS.** See *CALAMUS* and *DRACONIS SANGUIS*.

**SANGUISORBA.** A Name for the *PIMPINELLA*; which see.

**SANGUISUGA.** See *HIRUDO*.

**SANGUISUGUM.** A Disorder of the Heart, proceeding from an Accumulation of Blood, is thus called by some barbarous Authors.

**SANICULA.**

The Characters are;

The End of the Pedicle becomes a monopetalous, quinquefid Calyx, in which is contained a pentapetalous Flower, consisting of Petals closely contracted, and exactly covering two, three, or five Stamina; this is the Description of the Male Flower. The other Flowers are hermaphrodite, seated in a quinquefid Calyx, and having, also, five Petals, which are in like manner closely contracted, and accurately cover two, three, or five Stamina, placed about the Ovary, which consists of two lappaceous Ova, each furnished with an erect Tube. The Seeds are gibbous and echinated.

*Boerhaave* mentions but one Sort of *Sanicula*, which is,

*Sanicula*; *Officinatum*. *C. B. P.* 319. *Boerb. Ind. A.* 73. *Tourn. Inst.* 326. *Sanicula five Diapensia*, *Ger.* 801. *Fernox.* 948. *Rail Hist.* 1. 475. *Synop.* 3. 221. *Sanicula vulgaris*, *five Diapensia*, *Park Theat.* 522. *Sanicula mas Eufhsii*, *five Diapensia*. *J. R.* 3. 639. **SANICLE.**

This Plant has a small, stringy, fibrous Root, from which spring the Leaves on long Foot-Stalks. They are five-corner'd, resembling somewhat those of the lesser Maple, and



are serrated about the Edges, of a dark green Colour, smooth and shining. Its Stalks grow to be about a Foot high, bare of Leaves to the Top, on which grow little Umbels of five-leaved white Flowers, small and full of Stamina; each Flower being succeeded by two rough bur-like Seeds. It grows in Woods and Thickets, and flowers in May. The Leaves are used.

This is one of our prime vulnerary Plants, being frequently put in Wound-Drinks, and traumatic Apozems; and is good for Ruptures, inward Bruises, spitting of Blood, or any Hemorrhages, and for Wounds both inward or outward. *Milner's Bot. Off.*

By the Chymical Analysis, beside several acid Liquors, the Sanicle yields an urinous Spirit, and some concreted volatile Salt, and a good deal of Oil and Earth. It contains some Sal Ammoniac, Sulphur and terrestrial Parts. It is deterfive, vulnerary, and aperitive. It is used with the other Vulneraries in Broths, Pisans, and Potions for Losses of Blood, and to open and strengthen the Bowels. It is used after the manner of Tea. It is an Ingredient in vulnerary and deterfive Lotions, in Plaisters and Balsams for Wounds. *Martyn's Tournefort.*

It is called *Sanicula, a sanando*, "from Healing;" because of its sanative Virtue, which is so extraordinary, that the French have a Proverb,

*Qui la du Bugle et du Sanicle  
Fait aux Chirurgiens la Nicle.*

"He who has Bugle and Sanicle never wants a Surgeon." It has an Astringency with its Bitterness, as appears by its Taste. It is good, says *Lobel*, briefly summing up its Virtues and Uses, for internal and external Wounds, Hemorrhages, Dysenteries, Ruptures, and Lacerations, taken inwardly in Decoction, or outwardly applied.

For a Thickness and Protuberance of the Navel in Children, apply a Cataplasim of Sanicle boiled in Wine to the Part, and secure it with a pretty tight Bandage; and to the Back, opposite to the Region of the Navel, apply the bruised Root of Comfrey. This Prescription has been found successful in almost innumerable Instances. *Raii H. P.*

It is useful in consolidating Ulcers, Fistulas, Ruptures and Erosions. *Schroder.*

Sanicle is mightily commended by the French and Walloons, who eat it for Inflammations. It is good, also, in an Hemoptoe. *Bauhine* thinks it proper in hot Diseases of the Kidneys, but I see no Reason for it; but it is a useful Plant in a Languor and Decays from a Viscousness of the Humours. It is of a penetrating, balsamic Virtue; for it has an acrid Sort of a Fragrancy, in which consists its Virtue, and leaves an astringent Taste in the Mouth. The Leaves bruised, and applied to Wounds, cure them without Suppuration. They, also, remove external Tumors, and deterge Sordes. It is serviceable in Hernias and Hemorrhages, and in dissolving Tumors by Resolution or Dissipation, the Leaves being bruised and applied with Wine or Vinegar. The Decoction is taken inwardly to dissolve grumous Blood, and is good in Fractures, where Purgation and Absterfion are required. *Hist. Plant. Afric. Boerhaave.*

SANICULA, is also a Name for several Sorts of SAXIFRAGA.

SANICULA ALPINA. A Name for the *Verbascum; Emile; Alpinum; Villosum, Borriginis folio, & flore.*

SANICULA AMERICANA. A Name for the *Mitella; Americana; florum petalis fimbriatis.*

SANICULA FÆMINA. See ASTRANTIA NIGRA.

SANICULA MONTANA. A Name for the *CORTUSA.*

SANICULA MONTANA AMERICANA. A Name for the *Mitella; Americana; florum petalis integris.*

SANIES. The same as LICHOR.

SANIODES. *Σανίδης*, from *σανίς*. A Plank. Flat chested. *Galen.*

SANITAS. *Health.*

SAN-LUCIANUM LIGNUM. *Santa Lucia Wood.*

This is the Wood of a Tree named *Cerasus racemosa sylvestris, fructu non eduli*, C. B. P. It is brought from *Lorrain*. It is very tender, and has some Smell, but is little used in Physic. *Geoffroy.*

SAN MARTIANUM LIGNUM. This is a kind of red *Brazil* Wood, used in Dying, and which comes from *St. Martha*, near *Carthage*, in the *Spanish West Indies*. *Geoffroy.*

SANTALUM. *Sanders.*

There are three Sorts of Sanders, the white, red, and yellow. It is brought from *Siam*, and from the Islands of *Timor* and *Salor*; but Botanists are not agreed to what Tree it belongs. According to *Herman* it is called *Sircanda*, and bears Berries. The white Kind comes from the young Trees, the red and yellow from the old ones; the former

of these two being the outer Part of the Wood, the other that next the Pith. The Labourers who cut this Wood are often seized with malignant Fevers, and Deliria of a very singular Kind, the affected Person generally imitating the Actions of that Trade to which he was brought up; and they have also a *fames canina*, of a very terrible Kind. See *Bontius de Medicina Indorum*. The yellow Sanders is most proper for physical Uses. It is resinous, of an agreeable Smell, and excites sweating. The white has not so strong a Smell, and the red none at all; but it may be distinguished from *Brazil* Wood by its Roughness in the Mouth, when tasted, and accordingly it is a little astringent. All the Kinds, especially the yellow, enter into many Compositions; sudorific Decoctions are also made of them. *Geoffroy.*

The white and yellow Sanders of the Shops are produced by the same Tree, the cortical Part of which, according to many, is called white Sanders, and the medullary Part yellow Sanders: But *Garcias* informs us, that there is so great a Resemblance between the Trees which bear the white and yellow Sanders, that they cannot be distinguished except by the Inhabitants who sell them to the Merchants. *Dale.*

SANTALUM ALBUM. *Offic. Ger. 1389. Emac. 1586. Park. Theat. 1605. J. B. 1. 486. C. B. P. 392. Raii Hist. 2. 1804. WHITE SANDERS.*

The Part in Use is the Wood, which is hard, solid, ponderous, of a pale Colour, and of a Smell and Taste like that of the yellow Sanders; both Sorts are imported from the *East Indies*.

Both the white and yellow Sanders are refrigerating, drying and aperitive, hepatic and cordial. Their principal Use is in a Lipothymy, Palpitation of the Heart, and Obstructions of the Liver, and the like Disorders. Outwardly they are of Service in Catarrhs, Cephalalgia, Vomiting, and the like. *Schroder.*

SANTALUM CITRINUM. *Offic. Park. Theat. 1604. J. B. 1. 486. Raii Hist. 2. 1804. Santalum pallidum, C. B. P. 392. Ger. 1389. Emac. 1586. YELLOW SANDERS.*

The Heart or solid Marrow, is of a yellow Colour, a bitterish and aromatic Taste, and of a fragrant and grateful Smell.

Yellow Sanders is the Marrow of a certain Berry-bearing Tree called *Sarcante*, in the Island *Timor*, which, when separated from the Integuments, is solid, thick, and of a yellow Colour, of a bitterish aromatic Taste and fragrant Smell. This Commodity is brought from *China* and *Siam*, and the Tree itself is tall like a Walnut-tree, but bears Fruit resembling Cherries. The white Sanders is the paler Marrow of the same Tree, of a fainter Smell, and less aromatic Taste. When these Trees are dried, the Marrow alone is chosen; which, if it is not sufficiently odorous, is called white Sanders. Yellow Sanders derives its fragrant Smell and aromatic Taste from the tender Resin of which it consists, and which is easily extracted by infusing the Shavings of it in a sufficient Quantity of highly rectified Spirit of Wine. By Digestion a very yellow Tincture is extracted from it, which when inspissated over a gentle Fire, after the Spirit is abstracted, constitutes a liquid Balsam of a darkish Colour and grateful Taste, and which in Consistence and Colour almost approaches to *Peruvian* Balsam. And if this Balsam is again dissolved in highly rectified Spirit of Wine, it is a balsamic Essence of singular Virtue.

This Experiment excellently illustrates the Nature and Generation of the *Peruvian* Balsam, the Balsam of Capivi, and that of Mecha, which are nothing but liquid Resins; for if the resinous Principle of Sanders is dissolved in highly rectified Spirit of Wine, and the Solution inspissated, it assumes the Consistence of a Balsam, and is no more converted into a solid Resin, since some moist Particles have by this means intimately insinuated themselves into its Composition.

The Essence of yellow Sands is of the same analeptic and sedative Virtue with Amber, and is highly beneficial in Disorders arising from a Weakness and want of Tone in the nervous and membranous Parts; for which End, it may either be used by itself, or in Conjunction with the Essence of Aloes, Wood or Amber. *Hoffman.*

SANTALUM RUBRUM. *Offic. Ger. 1389. Emac. 1586. Park. Theat. 1605. C. B. P. 392. J. B. 1. 489. Raii Hist. 2. 1805. RED SANDERS.*

This is the Heart or middle Part of a Tree, that grows in the *East Indies*, upon the Coast of *Cormandel*. It is firm, hard, and ponderous, but of very little Smell or Taste; and is generally believed to belong to a Tree having papilionaceous Flowers.

The red Sanders is likewise accounted cooling and drying, and though of less Virtue is much more used than either of the former, especially to give a red Colour to Infusions, Tinctures, or Decoctions. It is, also, esteemed to be somewhat more restringent. *Milner's Bot. Off.*



It grows in the *East Indies*, beyond the River *Ganges*. The Part in Use is the Wood, or rather the Heart, or Matrix, separated from the outer Integuments, the Bark and Wood, and of a solid, dense, ponderous and red Substance.

This Species of Sanders is refrigerating and astringent. Whatever Virtues, therefore, are by the *Arabians* ascribed to the several Sorts of Sanders, against preternatural Heats, and the like kinds of Disorder, belong in a more especial manner to red Sanders. *Dale*.

From red Sanders, which is the solid, ponderous, and red Marrow of a siliquous and thorny Tree, which grows in *Malabar* and *Coromandel*, with Spirit of Wine, may be extracted a Tincture of a red Colour, as is sufficiently known. But 'tis a Circumstance new and unadverted to, that from this Wood may be prepared a Resin of a dark reddish Colour, a very small Quantity of which tinges a few Ounces of the Spirit of Wine of a beautiful Colour, resembling that of Blood. This Resin is prepared in the same manner with other Resins; for highly rectified and not common Spirit of Wine is to be poured upon the Shavings of the Wood. The Essence is to be extracted by a gentle Digestion; and when we obtain a large Quantity of it, the Spirit is to be extracted, and what remains liquid, is to be inspissated by a gentle Heat. Thus there remains a dark-coloured red Powder, a small Quantity of which dissolved in Spirit of Wine, tinges a large Quantity of the Spirit, of a beautiful and deep red Colour.

'Tis peculiar to this Resin, that it is so free from all Taste and Smell, that when it is kindled, there is no manner of Smell perceived; when kindled it burns, but froths greatly, and leaves a large Quantity of Earth. It tinges Spirit of Wine of a beautiful Colour, but produces no such Effect with any Oils, whether expressed or distilled: Nor is it dissolved by Oils, which sufficiently shews, that it rather consists of a subtle and earthy, than of a pinguious and oleous Substance. It may be used for tinging Medicines; and as it tinges the Spirit of Wine of a deep red Colour, it may by Anatomists be commodiously used for injecting the arterial Vessels of the Head.

SANTERNA. See BORAX.

SANTOLINA.

The Characters are;

The Root is fibrous; the Leaves are alternate, denticulated, crenated, and granulated. The Calyx is squamous, and as it were hemispherical. The Floscules are multifid, and separated from one another by imbricated Leaves. The Flowers grow single at the End of a Branch, and are larger than those of *Abinthium* or *Abrotanum*.

*Boerhaave* mentions twelve Sorts of *Santolina*, which are;

1. *Santolina*; foliis teretibus. See ABROTANUM FÆMINA.
2. *Santolina*; flore majore; foliis villosis, et incanis. *T.* 460. *Abrotanum fœmina, flore majore foliis villosis & incanis.* C. B. P. 137.
3. *Santolina*; foliis obscure; virentibus flore aureo. *T.* 461.
4. *Santolina*; foliis minus incanis. *T.* 461. *Abrotanum, fœmina, foliis minus incanis.* C. B. P. 137.
5. *Santolina*; incana; Chamæmeli odore suaviores. *Abrotanum, fœmina, folio collecto, incano.*
6. *Santolina*; Hispanica; foliis Chamæmeli. *T.* 461.
7. *Santolina*; Africana; Ericæ foliolis congestis; flosculis singularibus albis. *Camphorata, Africana, umbellata, frutescens Hermannii.* H. A. 2. 79.
8. *Santolina*; spinosa; foliis agerati. *Bellis spinosa.* Alpin. Exot. 327.
9. *Santolina*; Africana; Coronopi folio; cauliculis procumbentibus. *Bellis, Africana, capitulo aphylo, luteo, Coronopifolio, cauliculis procumbentibus.* H. L. Flor. 54.
10. *Santolina*; foliis Rorismarini; major. *T.* 461. *Abrotanum fœmina; foliis Rorismarini, majus.* C. B. P. 137.
11. *Santolina*; Hispanica; foliis vermiculatis.
12. *Santolina*; foliis Ericæ, vel Sabinæ. *T.* 460. *Abrotanum fœmina, foliis Ericæ, vel Sabinæ.* C. B. P. 137. *Boerb. Ind. Alt. Plant. Vol. 1.*

The first Species is thought by *Fabius Columno* to be the *Polium* of the Ancients, which is a very celebrated Herb, and he seems to be in the right. It is a Diaphoretic and Anticolic, whence it is an Ingredient in all alexipharmic Compositions. All the Species are alexipharmic and aromatic, like the *Eupatorium* and *Petasitis*. *Hist. Plant. Ascript. Boerhaave.*

SANTONICUM SEMEN. Worm-Seed, is a Grain used to destroy Worms generated in the human Body, and to which Children are especially subject. It is also called *Hagiospermos*, *Semen Sundum*, *Semen contra Vermes*, *Semen contra Semenzina*, *Santolina*, or *Xantolina*, and *Worm-Powder*. The Plant which produces this Grain, has Leaves so small, that they can hardly be distinguished from the Grain itself. It is pretended to be a Native of *Xaintogue*, [a Province of France]

whence it takes one of its Names; but what is sold by the Merchants who deal in Drugs, comes from *Persia*, and is imported by the *French*, *English*, and *Hollanders*, from *Aleppo*, *Alexandretta* and *Smyrna*. The Marks of its Goodness are, a full Body, a greenish Colour, a pretty strong Smell, and a bitter and pretty aromatic Taste; and we must be very careful that it be not coloured with an artificial Green, and that the Seed of *Abrotanum* be not substituted in its Room.

It contains much Oil, and essential or volatile Salt. Taken inwardly it is very good to kill Worms in the Body, and suppresses Vapours; the Dose is from half a Scruple to a Dram. *Lemery des Drogues.*

SAPA. See CARÆNUM, and DECOCTIO.

SAPERDA. *σαπίδν.* A Fish mentioned twice by *Hippocrates*, in his *Treatise de internis Affectionibus*. It should seem to have been preserved with Salt, or Pickle, like Anchovies. We learn from *Persius*, that it was brought from the *Black Sea*.

SAPHADA. Small reddish Scales, which adhere to the Hairs. *Paracelsus.*

SAPHÆNA. A considerable Vein on the Inside of the Ankle is thus called. *Galen, de Curat. per Venæsectionem*, is of Opinion, that the opening this Vein is of great Service in exciting the *Menses*; for by means of the Orifice made, the Blood is more copiously derived, not only to that Vein on which the Operation is performed, but, also, to all the other Veins arising from the same Trunk, as *Bellini* has at large demonstrated, because there is less Resistance in those Parts where the Vein is opened, than in the other Parts of the Body. If, therefore, Blood is taken from the Ankle, there will, of Course, be a more copious Derivation of the Blood to the Uterine Vessels, which arise from the Vena Cava, as well as the Saphæna. Consequently, since the Vessels are greatly distended by a large Quantity of Blood flowing into them, a Passage will be the more easily opened for the menstrual Blood. Thus *Mayern*, in his *Treatise de Morb. Intern. Cap. 22.* informs us, that he had seen speedy and surprising Effects produced by the Application of Leeches to the hemorrhoidal Veins. In like manner, when, without any viscid Quality, the redundant Blood is, through a Fault of the Vessels, retained, upon opening the Saphæna, the Humours are not only more rarified, but, also, more copiously conveyed to the Uterus. For both these Reasons, the Momentum of the Blood will be increased, to the uterine Vessels, thro' which the *Menses* will of course be excited. Hence we may form a Judgment of the Doctrine of *Lindanus*, so much extolled by *Ettmuller*: For the former of these Authors distinguishes the Times in which Venesection is to be used, as *Ettmuller* informs us in the following Words. "When the *Menses* are about to make an Eruption, but have not as yet appeared, a Vein is to be opened in the Arm; but after they have begun to flow, or are suddenly obstructed, the Saphæna is to be opened; but in the Ankle a Vein is never to be opened, unless the *Menses* actually flow, or are suppressed." *Ettmuller* accounts for this Doctrine in the following Words: "When the *Menses* are about to make an Eruption, and the Blood in a State of Turgescence and Rarefaction, the Effort of Nature is to convey it downwards; for which Reason, if the Vessels are small, they cannot be forthwith opened, but being rather distended, in some measure retard the Discharge of the Blood. When, therefore, by opening the Saphæna, the Impetus of the Blood is conveyed to the inferior Parts, the larger Quantity of it is conveyed to the Uterus, by which means the Disorder is increased; whereas, by opening a Vein of the Arm, some Quantity of it is solicited upwards, the Vessels are freed from Oppression, and the Blood circulates more freely. And an Opening of the Saphæna will never provoke the *Menses*, except in Cases where (when actually flowing) they have been suppressed either by Cold or a Right." In this Reasoning it is supposed, that the Blood is so turgid and rarified, that it might quickly enough pass through the Vessels, unless, in consequence of its being conveyed downwards, Plenitude should obstruct its Motion. But that the Vessels should yield the less easily, the more they are distended with Blood, is a Principle so far from being compatible with sound Philosophy, that it is inconsistent with common Sense. For if opening the Saphæna promotes the *Menses*, when already flowing, and recalls them when suppressed, why should it not, at other times, recall their Discharge? Whence happens it, that in one Case it augments the Momentum of the Blood, and in another diminishes it; whilst, at the same time, the Blood is equally strongly conveyed to the Uterus? Since, by opening a Vein of the Arm, some Quantity of Blood is solicited upwards, the Passages of the Uterus are freed from Oppression; but the Impetus becoming languid, in consequence of the Diminution of the Plethora, the Vessels



fels are not so easily opened, because they are not so much distended. *Ettmuller* affirms, that *Riverius* gives us an Instance in Confirmation of this Doctrine of Plenitude, in which he tells us, "That, as often as the Vein in the Ankle was opened in a certain Woman, her Menfes were stopt, whilst they flowed copiously by opening a Vein of the Arm." As this Phenomenon seems contrary to the common Doctrine of Physicians, the Professors at *Montpelier* have explained it in the following Words. "Since this Woman was plethoric, and afflicted with a Suppression of the Menfes, in consequence of a Redundance of Blood, so distending the Vessels of the Uterus, that they could not be sufficiently compressed; the Blood being attracted to those Vessels, by opening the inferior Veins, the Obstruction was augmented. But when, by opening the superior Veins, there was a Revulsion from the Vessels of the Uterus; and when their Plenitude and Distension were lessened, they then more easily contracted themselves, in order to perform the natural and usual Expulsion made from the Uterus." There is a Distinction to be made between a Plethora when single, and when accompanied with a Lensor of the Blood; for by the former the Menfes cannot be suppressed, nor consequently the Opening of the Saphæna, which increases the Plethora to the uterine Vessels, prove hurtful to the Eruption of the Menfes. But in a Plethora, accompanied with a Lensor of the Blood, because there is an Obstruction in the Uterus, that is, because the viscid Blood stops in the capillary Vessels, the Humours being more copiously conveyed to the Uterus by opening the Saphæna, and the Blood flowing out more impetuously, there is a greater Adhesion of the viscid Parts to the Orifices of the Vessels. But this Danger in opening the Saphæna is not to be ascribed to the Plethora, but rather to the Lensor; so that the Caution of *Lindanus* only holds good in that Species of Plethora which is accompanied with a Lensor of the Blood. The Woman already mentioned from *Riverius* laboured under a Plethora of this Kind; for which Reason her Physicians justly made it their Intention of Cure to diminish the Plethora by liberal Venesection in the Arm; and afterwards, by opening the inferior Veins, to solicit the Blood to them, especially about the usual Time of Eruption. The Reason why it is of more Service to open a Vein in the Arm first, and afterwards the Saphæna, seems to be this. When the Quantity of Blood is diminished by Venesection in the Arm, the Velocity of the Remainder is increased; and when the Saphæna is afterwards opened, the Blood is propelled more forcibly to the inferior Parts; and thus the Plethora in the uterine Vessels is perpetually increased. Hence the Plethora and Velocity being both increased, the distending Force of the Blood on the uterine Vessels, is, for a double Reason, augmented, and in consequence of this, a due Evacuation is excited. *Freind's Emmenologia*.

SAPHERA, or ZAPHERA. *Zaffer*, a bluish mineral Substance, made, according to *Lemery*, from the *Caput Mortuum* of Cobalt, left after the Sublimation of Arsenic, and twice the Quantity of powder'd Flint calcin'd together, so as to form a Sort of Stone. It is used by the Painters and Enamellers, but is possess'd of no medicinal Virtues.

SAPINDUS. The same as ARBOR SAPONARIA, which see.

SAPINUS, according to *Blancard*, is the Fir, or the inferior Part of the Fir without Knots.

SAPO. Soap. See OFFA HELMONTIANA.

#### SOAP FROM EXPRESSED OILS AND A FIXED ALCALI.

Take a Quantity of expressed Oil-Olive in one Glass, and an equal Weight of Oil of Tartar in another, pour the Oil gently upon the Lixivium, and it will float thereon, and the two Liquors remain perfectly distinct. Shake the Vessel wherein they are both contained, and the Mixture will immediately appear white, opaque, thick, and somewhat viscous; and when suffered to stand in this State, it will continue for some time equally mixed, but at Length the Oil and the Lixivium will separate from each other; whence it appears, that expressed Oils, by Means of the Acid always lodged therein, are disposed to mix with Alkalies, even tho' diluted with Water; but that this Union is so weak as easily to be separated. Again, it seems probable, that the Acid is the Means of procuring this Combination; because Oils, deprived of their Acid, more difficultly unite with Alkalies. If this Mixture be gently boiled over a slow Fire, till the Water is gradually exhaled, it comes into one consistent white Mass, of a nauseous oily Smell, and a sharp, alkaline, ungrateful, unctuous Taste, which will easily resolve in the Air; but if in the Boiling, a just Proportion

of the dissolved Alkali or Oil be added, or mixed therewith, so as that the Compound may perfectly dissolve in Water, without separating from its Oil, and yet manifest nothing alkaline to the Taste, and remain long in the Air without running, it is then called perfect Soap. It was afterwards found, by a successive Repetition of Experiments, that the stronger the Alkali, the more perfect the Soap; and as Quick-Lime wonderfully increases the Power and fiery Nature of Alkali, an Alkali prepared by means of the same, began to be used instead of the simple Kind, for the making of Soap; and because they also observed, that the Union was made more perfect by long continued Boiling, and that this Boiling required a larger Proportion of Water, they added Water more plentifully, and at length, by repeated Trial, they likewise found that a certain Proportion of Oil and Alkali was required; and thus by successive Degrees, the certain and determinate Way of making Soap was found.

They take the fixed, alkaline fiery Salt, prepared with Quick Lime; this they dissolve in such a Proportion of hot Water, that the Lie may support a new-laid Egg; and this the Soap-makers call their capital Lie. They afterwards dilute Part of it with more Water till a fresh Egg will sink therein; and this they call the weaker Lie. They afterwards mix their Oil-Olive with an equal Weight of this weaker Lie, by stirring them well together, till the whole becomes white, then boil the Mixture with a gentle Fire, keeping it continually stirring, till the Water being exhaled, the Remainder begins to unite; at which time they throw in thrice the Weight of capital Lie, in Proportion to the Oil, and mix and boil till the Mass becomes so thick, that a little of it laid upon a cold Stone, appears to be of a due solid Consistence; and if now a Part of this cold Mass is dissolved in Water, it manifests no Signs of Oil, this shews that the Oil is well united with the Alkali; but if any Oil still appears, the Addition of a little more capital Lie is required, and the Boiling must then uniformly be continued, till the Soap will perfectly dissolve in Water. At this Time the Soap is tasted, and if it proves sharp and alkaline, it is a Sign that Alkali abounds too much therein. Therefore a little more Oil is added, and the Boiling continued, till at length a Mass is obtained, so hard as to cut in the cold, and that will perfectly dissolve in Water, and neither taste alkaline upon the Tongue, nor run spontaneously in the Air; and thus the Soap is perfected.

Instead of Oil-Olive any other fat Substance may be used, as the Fats of Animals and the Oils of Fish; thus black Soap is made from Train-Oil, or the boiled Blubber of Whales; but the purer the Alkali is, and more scentless, tasteless, and less ungrateful the Oil, the better the Soap, especially for medicinal Use.

#### R E M A R K S.

Here we see an intimate Combination of native Oil with fixed Alkali, by Means of Water and Fire, into a homogeneous Mass, which will perfectly dissolve in Water; whence it appears, that the Oil here loses its former fat Nature, and acquires another more agreeable to Water; and that this is brought about by the Means of sharp fixed Alkali. And therefore, where the Humours of the Body abound with Oil, Salts are generally useful, and consequently in this Case, a prudent Use of fixed alkaline Salt may be allowed. Hence also we are shewn a Way, whereby the Acrimony of Alkali may be entirely blunted, so as to grow soft and put off its corrosive Nature, by the means of Oils. Whence again, in such Cases, where the like sharp, saline Matter predominates, fresh expressed Oils, drank in plenty, will blunt it; and this has been often practised with good Success in the acutest Diseases, and the more pernicious Kind of Scurvy; again, when this Acrimony is spontaneously generated in a certain Place, as in the Kidneys or Bladder, where the Stone drinking in the Urine, turns it to this Kind of Acrimony: But in the Soap so produced, tho' the Tenacity of the Oil is abolished, yet the former Virtue of the lixivial Salt remains, whereby it deterges without Danger of corroding; for when mixed with Water, it makes a strong saponaceous Lie, which by Heat, Motion, and Trituration, dissolves Gums, Oils, Rosins, and gross Fats, rendering them also saponaceous, or soluble in Water; and thus it has a scouring, detergent, opening, clearing Property. Hence it renders coagulating Humours fluid, opens old Obstructions, and thereby restores the lost Use of the Parts. It, also, has great Effects upon Concretions, consisting of gross Earth and Oil; it prevents Acids from coagulating the Chyle or Milk, and even resolves them after Coagulation. Whence it appears to be almost an universal Opener, Diluter, Resolver, and thinner in the Body, in the abovementioned Cases; being drank upon an empty Stomach,



## S A P

well diluted and at different Times, in a sufficiently large Quantity, and assisted by the Motion of the Body. It is likewise wonderfully serviceable, being externally applied in sinuous and fistulous Ulcers. It may be ting'd and disguised, by giving it a grateful Colour with Saffron, Turmeric, Cochineal, or other Pigments; and if it still proves disagreeable, on account of the nauseous Smell acquired by the Oil in boiling, it may be corrected by a little Balsam of *Peru*. But its Use is highly pernicious in those Distempers, where Life is in Danger from a Putrefaction, that dissolves and corrupts the Humours, as has frequently appeared in the Plague and other putrid Distempers, according to the just Observation of *Diemerbroeck*. Many other Particulars of chymical and medicinal Use may be easily deduced, concerning this noble Production, from what is above delivered. Soap effects what neither Water nor Oil could perform, does that with Safety which Alkalies do with Danger, and can perform what other Salts cannot.

### SOAP FROM DISTILLED OILS AND FIXED AL-CALI.

Chymists considering the Virtues, which by Experiment they found in distilled Oils, were concerned to find that these Oils, not mixing with Water, could not enter and act upon the Humours of the Body; and therefore observing that expressed Oils might be successfully united with fixed Alkali, they went upon trying the same with distilled Oils, but found that these lost their Virtue by boiling, and even could not thus be joined with the Alkali, and hence tried various Experiments to unite these different Bodies, till excited by the Directions and Promises of *Helmont*, some of them seemed to have found the Means of effecting the Thing. I myself, formerly made many tedious Experiments to this Purpose, and at length succeeded as I shall now relate. The Secret consists in this, that the Alkali should be perfectly sharp, pure and dry, and come in Contact with an Oil perfectly deprived of Water; all the rest is successfully performed by the Atmosphere; but if the least Water should enter, the Experiment will be frustrated.

Take the purest and strongest fixed Alkali, and grind it in a clean Iron Mortar, with an Iron Pestle, to fine Powder, the finer the better, while it remains thoroughly hot from the Fire, and almost ignited; then put it into an extremely dry and well heated Urinal, and set it in a hot and dry Place, on a clear and dry Day; and at the very Instant that the hot Salt is all collected at the Bottom of the Glass, let fall therein the true ætherial and pure Oil of Turpentine, so that one Drop may immediately follow another, and fall upon the middle of the hot Salt; the Oil itself having been first well heated; and thus the Oil will immediately, with a great Fume and hissing Noise, be attracted into the thirsty Salt, and diffuse itself intimately through the whole Mass. Continue to pour in the Oil quick, till enough is entered into the Salt, and floats above it, so as to prevent it from touching the external Air which is always moist with Water, or from touching the Surface of the Salt. Set the Glass in a Cellar, where being covered with Paper, the Oil will soon disappear, and be united with the Alkaline Salt; then pour some more of the warm Oil thereon, and mix it with a Stick into the former Mass. Set the whole by, as before, and continue thus till near thrice the Quantity of the Oil is united with the Salt; the whole will be now a saponaceous and penetrating Mass, which, the more it is stirred, the sooner and better it is made, whence it may be expeditiously obtained, by putting it into a strong Glass, and suffering it to be carried daily, and shook in a Stage Coach, as Doctor *Grew* and *Bohn*, have formerly observed. The Experiment has always succeeded well, when I have observed the foregoing Circumstances; but never if the least of them were neglected. The Operation is known to be well performed if a little of the Soap will mix with Water without manifesting any Sign of Oil. If the Soap, thus prepared, be long kept in the Urinal, there usually rises, by degrees, along the Sides of the Glass, a certain white crystalline Salt, of no disagreeable Odour, and of a penetrating, mild, saline, but not alkaline, Taste; which is wonderfully insinuating, easily soluble, and affords an highly useful medicated Soap.

This Salt which is but little in Quantity, I suspect gave Origin to the Assertion, which perhaps is too free, that fixed Salt of Tartar was here rendered Volatile, by means of Oil added thereto, so as to become a Substitute for the Alkali; but when I urged this Soap with Fire, after it was well prepared, I did not find the promised volatile Salt.

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### REMARKS.

This Experiment also shews us the thirsty Nature of pure fixed Alkali, whereby it drinks in and unites these Salts with itself, and again how a sharp fiery Alkali may be softened into a mild oily Salt. We have sufficiently spoke to the Virtue it has against acid, austere and viscous Coagulations, under the former Process; we must however observe, that all the Virtues there related, are here found more Noble and Active, and constantly somewhat heating. Hence we understand the Nature of distilled Oils, with regard to fixed Alkalies, or of fixed Alkalies with regard to them; and of the new Production by a proper Combination of the two. *George Starkey*, and his Followers, call this Soap Volatile; but I never could find it so, as I said above. This is the Soap which *Matthew*, an Empiric of *London*, made under the Title of *Matthew's Corrector*, wherewith he mixed Opium, and the Roots of Hellebore and Liquorice, and then digesting them together, he made general Pills thereof, that were diaphoretic, scarce emetic, or purgative, but anodyne, though they would often vomit the next Day. *Starkey* published a more correct Preparation of these Pills at the End of his *Pyrotechny*, where he boasts of their Virtue after the Manner of Chymists, unjustly pretending that the Virtue of the Hellebore remained entire, though deprived of its vomiting Quality. The excellent *M. Homberg* observes that a strong Lixivium made of this Soap, mixed with a sharp Acid is strangely rendered turbid and changed; while the Alkali being attracted by the Acid, lets go the Oil. These Soaps being well dried and digested with pure Alcohol, are in some measure resolved into the less Elixir of the Philosophers, where the Sulphur and Spirit are united.

### THE SOAP OF BALSAM OF SULPHUR.

1. Take the Balsam of Sulphur, as directed to be prepared with a Vegetable express'd Oil under the Article BALSAMUM. Dilute it with twice or thrice its Weight of the same Oil as was used in its Preparation, and herewith make a Soap. This will be the Soap required, which *Starkey* in his *Pyrotechny* so highly commends from *Helmont*.

2. Or take Balsam of Sulphur, with Turpentine as directed under the same Article, and therewith, instead of simple Oil of Turpentine, make a Soap: This Soap will be the sulphureous Soap of the Philosophers.

### REMARKS.

These Processes shew the Ways whereby natural simple Sulphurs, as also such as closely adhere to Semi-Metals, as the Sulphur of Antimony, &c. may be joined to fixed Alkaline Salts, and thus become mixible with nearly all the Animal Juices, and exert their Virtue in all the Vessels of the Body. The followers of *Helmont* hence promised themselves wonderful medicinal Effects, not easily to be obtained by other Means; because in these Sulphurs, so opened, they find a great solutive Power, which is manifest by their disagreeable Odour, their ungrateful, and highly penetrating and heating Taste; but the same Effects may be had in the Soaps described above, without the disagreeable Odour and Rancidness. These Processes, however, have their Chymical Use.

### THE BALSAM, OR SOAP OF SULPHUR, UNITED WITH ALCOHOL.

1. To the terebinthinated Balsam of Sulphur contained in a tall Bolt-Head, add six times its Weight of pure Alcohol, and make a Solution; which having stood for some Time, the Sulphur in part precipitates out of the Balsam, into sulphureous Crystals, and in part remains dissolved, so as to afford an alcoholized Balsam of Sulphur.

2. Or take the terebinthinated Soap of Sulphur, as described in the preceding Process, N<sup>o</sup> 2. digest it with Alkali, and this makes perfectly the same Solution, of a very penetrating Taste and Odour. *Boerhaave's Chymistry*.

SAPONARIA. A Name for the *Lychnis, Sylvestris, quæ Saponaria vulgo*.

SAPONEA. The Name of an Arteriacal, or Pectoral Medicine, made of Oil of sweet Almonds and Sugar dissolv'd in Water of Violets. *Cassellus* from *Claudius*.

SAPOR. Taste. See *Gustus*.

SAPOTA. The *Mammæ Sapota*.



The Characters are ;

It hath a Rose shaped Flower, consisting of several Leaves, which are placed in a circular Order ; from whose Empalement arises the Pointal, which afterwards becomes a large, oval, short, fleshy Fruit, inclosing an oblong pointed Stone or Fruit, which is finely polished, having a rough Fissure on one of the Edges, of an Ash Colour.

Miller mentions two Sorts of *Sapota*, which are ;

1. *Sapota fructu turbinato minori. Plum. Nov. Gen.*
2. *Sapota fructu ovato majori. Plum. Nov. Gen.*

The Name of *Sapota* is what these Fruit are called by the Natives of *America* ; to which some add the Appellation of *Mammæ*. But there is no other Name given to these Fruits by the *English*, since they have settled in the *West Indies*, so far as I can learn.

The first of these Trees is common about *Panama*, and some other Places in the *Spanish West Indies*, but is not to be found in any of the *English Settlements in America*. The second Sort is very common in *Jamaica*, *Barbadoes*, and most of the Islands in the *West Indies*, where the Trees are planted in Gardens for their Fruit, which is by many Persons greatly esteemed.

These Trees grow in *America*, to the Height of thirty-five or forty Foot, having a strait Trunk, covered with an Ash-coloured Bark. The Branches are produced on every Side, so as to form a regular Head. These are beset with Leaves, which are a Foot in Length, and near three Inches broad. The Flowers, which are produced from the Branches, are of a Cream Colour ; when these fall away, they are succeeded by large, oval, or top shaped Fruit, which are covered with a brownish Skin, under which is a thick Pulp of a Ruffet Colour, very luscious, called natural Marmelade, from its Likeness to Marmelade of Quinces. *Miller's Dictionary, Vol. 2.*

**SAPON.** The Name of a Wood used in dying, but of no medicinal Virtues.

**SAPPHIRUS.** Offic. Aldrov. Mus. Metall. 971. Geoff. Prælect. 80. Kentm. 48. Mont. Exot. 14. Calc. Mus. 223. Boet. 183. Worm. 104. Schrod. 320. Charlt. Foss. 38. De Lact. 30. *Sapphirusmas cæruleus*, Schw. 391. *Lapis Sapphirus*, Matth. 1387. **THE SAPPHIRE.**

The Sapphire, called by some the Gem of Gems, is a hard Stone of a blue Colour like that of the clear Sky. It comes nearest the Diamond in Splendor, Transparency, and Hardness, and is of two Kinds ; one pale, called the Female Sapphire, the other of a deeper blue, called the Male. There is a third Sort, likewise, which has no Colour at all, and is sometimes made to pass for a Diamond, but is neither so hard nor so brilliant.

Sapphires are brought from different Parts of the *East Indies*, and thence called *oriental*. The rest are found in *Silesia* and *Bohemia*, called *occidental*. The Colour of Sapphire may be taken out by Fire, and then it looks like a Diamond ; for which Reason I believe this Colour to come from a small Mixture of fine Sulphur of Copper. Many are the inestimable Qualities superstitiously ascribed to this Stone ; but, besides these, we are told that it raises and exhilarates the Spirits, resists Poison, and cures Ulcers of the Intestines. *Geoffroy.*

It is of a cold and dry Quality, astringent, consolidating, alexipharmic, cordial, and ophthalmic. *Schroder.*

**SAPRIAS.** σαπρίας. The same as **ANTHESMIAS**.

**SAPURUS.** The same as **SAPPHIRUS**.

**SARAFFI**, is explained by *Rulandus*. *Gypsa.*

**SARAPOUS.** σαράπους. A Person whose Toes are very distant from each other. *Galen. Exeges.*

**SARCA, SAYRSA, or SARRA.** Iron. *Rulandus.*

**SARCION.** σαρχιον. A Caruncle.

**SARCOCELE.** σαρκοκήλη. From σάρξ, Flesh, and κύλη, a Tumor. A Species of *Hernia*. See **HERNIA**, and **CATRATIO**.

**SARCOCOLLA.** Offic. C. B. P. 498. Park. Theat. 1544. Raii Hist. 2. 1847. Geoff. Traët. 364. *Sarcocolla Offinarum*, J. B. 1. 308. **SARCOCOL.**

This is a Gum which comes over in small whitish yellow Grains, with a few of a reddish Colour mixed among them, of a viscid and somewhat bitterish Taste, with a sweetish Relish. There is another Sort, which has been brought over lately in Lumps of a brownish yellow Colour, smelling and tasting somewhat resinous, very friable, and powdering of a whitish yellow Colour. It is said to come from *Persia*, but we have no Knowledge of the Tree which produces it.

It is of a restraining, consolidating, glutinous Nature, good to heal and cleatise Wounds. It is serviceable against Dysenteries, Spitting of Blood, and Bleeding at the Nose ; and is frequently made use of in Distempers of the Eyes. It is put into *Trochisci albi Rhafis* and the *Emplastrum Opodeldoc*. *Miller's Bot. Off.*

To make it into a Collyrium, nothing is required but to dissolve it in Plantain Water. *Geoffroy.*

Chuse what is recent, of a Colour inclining to Paleness (for the old and stale is reddish) of a bitter Taste, a porous and glutinous Substance.

It is heating, drying, astringent, consolidating, conglutinating, digestive, and maturating. Its principal Uses are in exterging and consolidating Wounds, and inducing a Cicatrix over them, whence it has its Name. It is of excellent Service in Rheums, Albugo, or Films affecting the Eyes ; for which Purposes it is macerated five Days in Asles or Women's Milk ; and being mixed with Rose-Water, and (if you think fit) with a little Sugar, is applied to the Eye-lids. It is an Ingredient in *Anacollemas* for Hæmorrhages of the Nose. *Dale.*

**SARCOEPIPOCELE.** A Kind of compound Rupture, consisting of a Descent of the *Epiploon*, and a *Sarcocele*. Or a Rupture of the indurated *Epiploon*, either umbilical or scrotal.

**SARCOMA.**

A Sarcoma is defined a fleshy Tumor, arising in any Part of the Body, from some Effusion of the nutritive Juices out of their Tubuli, as happens in Contusions, and by some other Accidents. This Tumor being certainly made up of the same Materials, and having the like manner of Accretion with that of other Parts, but with this Difference only, that the latter is restrained by the Course of the Vessels, to some certain Figure, and equal or irregular Dimensions, whilst the former is in Form, and under no certain Restriction or Limitation.

For when this precious Liquor, by Reason of some Obstacle, is perverted from its primary Use or Office of nourishing some certain Parts, rather than lie unactive, busy Nature will be still forming something thereof, however rude or unshaped, as well as useless it may prove.

The same *Lusus* or Aberration is daily seen in Plants, with the like Excursions of their Sap, analogous to the Blood of Animals, when by some Accident of Let or Stop in its more regular progressive Motion, it is forced to deviate or turn aside out of its Channels.

The Sarcoma is distinguished from encysted Tumors, in that it has no Cystis or proper containing Capsula like those, nor is it moveable as they are ; neither yet does it give way as the rest to any Pressure, having no Cavity, but is firm, compact, and more solid.

As to the Cure, whoever reflects upon the Nature and Matter of this Tumor, will easily apprehend it is to no Purpose to expect it should either be repelled or dissolved, and as little to hope for Suppuration ; since it is made up of Flesh itself, or the extravasated nutritious Juice here carnified, and turned to a solid Substance ; and if the Base or Foundation thereof be not small enough to allow of the Ligature, it can be no otherwise removed than by Knife or Fire, either actual or potential : By the first I mean, the hot Iron ; by the latter, the escharotic, or caustic Application.

It may, indeed, so happen as to want all three, not only to stay the Hæmorrhage, or Flux of Blood, but to eradicate and consume the Basis ; which being done, and the Wound digested, you are to incarn, if there be Occasion, or otherwise to dry up the Remains into a Cicatrix.

But before you enterprize any of these Operations, you are thoroughly to examine the Nature of the fleshy Body you are about to eradicate, either of these Ways : Thus, when of a mild Appearance, soft and tractable, of the natural Colour or kindly Aspect, attended with little Pain, situated free from the larger, or fed only by some capillary Blood-Vessels, clear also of the Nerves and Tendons, in a good Habit of Body, and a governable Patient, there will be greater Encouragement. On the contrary, when hard, livid, unequal, painful, seated in the Joints, or among the tendinous Parts, nourished by some large Artery, the Body cacochemical, and the Sick unruly, 'tis better not to meddle therewith.

Farthermore, observe in all Operations of this kind, and indeed in many others, though seemingly of less Moment, it will be requisite, that the Patient's Body should be prepared three or four Days before, by Phlebotomy, Clysters, or lenient Purgation, as also an abstemious Diet, which latter ought to be continued through the whole Course of the Cure, to prevent a Fever, with the consequent Symptoms. *Turner's Surgery.*

**SARCOMPHALON**, from σάρξ, Flesh, and ὑμφαλοι, the Navel. A fleshy Excrecence at the Navel.

**SARCOPHAGOS**, σαρκοφάγος, from σάρξ, Flesh, and φάγω, to eat. A Name for the *Assus Lapsi*. Catheretics are, also, thus called.

**SARCOPHYIA**, σαρκοφυία. A fleshy Excrecence, or **SARCOMA**.

**SARCOPYODES**, σαρκοπυώδης. An Epithet of Spit resembling purulent Flesh, which is sometimes cough'd up in a Consumption.

**SARCOSES,**



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**SARCOSIS**, *σάρκωσις*. The same as **SARCOMA**.

**SARCO'THLASIS**, *σαρκόθλασις*, or **SARCO'THLASMA**, *σαρκόθλασμα*. From *σάρξ*, Flesh, and *θλάω*, to contuse. Contused Flesh, or a Contusion of the Flesh. *Nonus*.

**SARCO'TICA**. Sarcotics. That is, Medicines which generate Flesh in Wounds.

**SARDA**, or **SARDINA**. The Pilchard.

This is a small Fish found in the *Mediterranean*, which resembles the Anchovy, but is larger and thicker; and it is less than a young Snad. Sometimes they keep in the Middle of the Sea, and at other Times resort near the Shores.

This Fish is best when young, tender, well fed, fresh, and catch'd in *March* or *April*. It contains much Oil and volatile Salt. When fresh it is delicious Food, nourishing, opens the Body, produces good Juice, and is of a dissolving Nature, and may be advantageously applied, when pounded, to Swellings of the Gums and Legs.

When pickled, it loses some of its excellent Taste, heats much, causes Thirst, makes the Humours sharp and pungent, and produces nearly the same Inconveniencies with the Pickled Herring; but it has a much finer and more agreeable Taste, and may be reckoned among those Foods which are more pleasant than wholesome. When it is fresh, it is good in cold Weather, for any Age and Constitution; but when it is pickled, it ought to be eaten more moderately, especially by those who are young, and of a hot and bilious Constitution.

**SARDA**, is also a Name for the *Sardius Lapis*, Cornelian.

**SARDONIUS RISUS**. Sardonian Laughter, a convulsive and involuntary Laughter; it acquires this Name from the *Herba Sardoniana*, or *Sardoa*, which is the *Ranunculus; palustris; apii folio; levis*, and which is said to excite a Kind of Madness and Convulsions, by which the Cheeks are contracted in such a manner, as to resemble those of Persons under a Fit of Laughter. This Disorder, which has passed into a Proverb (in which Acceptation *Sardonius Risus* signifies a forced Laugh) is justly regarded as very dangerous, since it induces sudden and unexpected Death, under the Disguise of a false Laughter.

The Cure for those who are disordered by taking this Herb is first to vomit, and then to take a Draught of Hydromel and Milk, and to use Fomentations, Embrocations, and Inunction of the whole Body with hot Ointments. The Patient is, also, to bathe in Water and hot Oil, and after Bathing to be anointed, and very well rubbed. In general the Cure is to be managed in the same Manner as for Convulsions; Castor, also, may be taken, either alone, or in Passum, with other Medicines of the like Nature. *Aetius, Tetrab. 4. Serm. 1. Cap. 66. copied verbatim by Paulus and Aetuarus.*

**SARDONYX**, *Offic. Boet. 233. Kentm. 49. Charlt. Foss. 34. De Laet. 70. Worm. 97. Calc. Mus. 241. Sardonyx Indica, Geoff. Prælect. 78. THE SARDONYX.*

The *Sardonyx*, as the Name imports, is a precious Stone, of an Appearance betwixt the *Sardus* and *Onyx*. *Geoffroy* says, that the *Onyx*, or *Sardonyx* according to some, is different from the true *Sardus*. See **ONYX**.

The *Sardus*, or the Sardin Stone, is very rare, and not perfectly transparent. We meet with two kinds of it, one called *Oriental*, the other *Occidental* or *European*, the former of which is the hardest. Both these were by the Ancients termed *Sardonyx*. The second Sort is the *Indian* and *Arabian*, of which the former is pellucid, the other opaque.

The *Indian Sardonyx* resembled both the *Sardus* and *Onyx*, its Surface being like the *Onyx*, or human Nail; but its Root was white, like the *Sardus*, or of a Flesh Colour; and was mostly transparent, though some of them being opaque, were from thence called *Cæca*, or blind.

The *Arabic Sardonyx*, called by some *Memphitis*, was distinguished by a black or dark blue Substratum, surrounded by a white Circle, and by its Surface being more or less white. This, by Jewellers, is termed simply *Onyx*.

The Ancients were of Opinion that the *Sardus*, by a certain Irradiation, exhilarated the Mind, banished Fear, inspired with Courage, defended against the Power of Witchcraft and Poison. It is given in Powder to stop all bloody Fluxes; but is very little used at this time. *Geoffroy*.

**SARDUS**. See **CARNOLUS**.

**SARE**. The same as **ESSERE**.

**SARFAR**. Iron. *Rulandus*.

**SARGAZO**. The *Vitis Marina*. See **FUCUS**.

This Plant covers a large and spacious Sea of the *Indies*, elevating itself a Hand's Breadth above the Surface. It shoots forth several fine, slender Stalks, interwoven one among another. The Leaves are long, thin, strait, serrated at the Edges, of a reddish Colour, and of a Taste like that of *Percepie*. The Fruit is a round Berry, as big as a Pepper-Corn, light, and empty. The Plant is very tender when first taken out of the Water, but becomes hard and brittle when it is dry'd. There is no Root to it as yet discovered, but only the

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Mark where it has been broken off when taken out of the Sea; but it has, very probably, its Root in the Bottom of the Sea. This Herb, by its vast Abundance, renders the Navigation of that Sea very dangerous. It is eaten in Sallads. *Lemery des Drogues*.

*Sargazo* is very aperient, and good to provoke Urine, and break the Stone in the Kidneys and Bladder, for the nephritic Colic, and the Scurvy, being either eaten, or taken in Decoction.

*Sargazo* comes from *Sargasso*, which is the Name the *Portuguese* give that Extent of Sea which lies between the Islands of *Cape Verd* and the *Canaries*, and the main Land of *Africa*.

**SARGUS**, a bulky Fish, fleshy and thick, and found in the *Egyptian* Sea, on the Shores, and in the Sand. It has a large Body, covered with fine Scales, and is of a Colour inclining to a Violet. It has a capacious Belly, sharp Snout, and great Teeth resembling human Teeth. It has a black Spot towards the Tail, and its Body is often beautified with Streaks of the Colour of Gold and Silver. It is a Native of the *Adriatic* Sea, and is said to be so great a Lover of Goats, that if it smells them, or does but see their Shadow, it leaps and throws itself forward in order to get upon them. It commonly feeds on the Mud and Surf, that is found on the Seashore. It is good to eat, but its Flesh is hard.

The *Sargus* is esteemed good for the Dropsy, being taken in Broth. The Teeth worn about the Neck, are supposed to be a Preservative from the Tooth-Ach. *Lemery des Drogues*.

**SARMATICA LUES**, is the **PLICA POLONICA**.

**SAROPUS**. The same as **SARAPUS**.

**SARRACENA**. The *Side-Saddle Flower*.

The Characters are;

It hath a Flower consisting of several Leaves, which are placed circularly, and expand in Form of a Rose, and resting in a many-leaved Empalement. From the middle arises the Pointal, which is membranaceous, and shaped like a Hood, and afterwards becomes a roundish Fruit divided into five Cells, which contain oblong Seeds.

*Miller* mentions but one Species:

*Saracena Canadensis foliis cavis et auritis. Infl. R. H.*

This strange Plant is a Native of *New-England, Virginia*, and several Places in *North America*; where it grows on Bogs, and such Places where the Waters usually stand in Winter. The Leaves of this Plant arise from the Root every Spring, being eight or nine in Number, which are small at the Bottom, but swell larger towards the Top, and are hallow like a Pitcher, having a Sort of an Appendix at the Top, somewhat resembling a Flap, so that in these Leaves there is commonly a large Quantity of Water contained. Between the Leaves arises the Flower-Stem, which hath several rosaceous Flowers growing on the Top, which are succeeded by roundish Fruit.

The Name was given to this Plant by Dr. *Tournefort*, in honour of Dr. *Sarazin*, a curious Botanist, who sent the Plant from *Canada* to Dr. *Tournefort* at *Paris*. *Miller's Dictionary*.

**SARRAMPIO**. The same as **PICOTA**.

**SARSAPARILLA**. *Offic. Smilax aspera Peruviana, Park. Theat. 173. Smilax aspera Peruviana sive Salsaparilla, C. B. P. 296. Raii Hist. 1. 656. Smilax Peruviana Salsaparilla, Ger. 709. Emac. 859. Smilaci affinis Salsaparilla, J. B. 2. 117. Ivapecanga Brasiliensis, Sarsaparilla Hispanis, Marceg. 11. Macapalli seu Zarca-parilla, Hernand. 288. An Carivillandi? H. M. Part. 7. p. 59. T. 31. SARSAPARILLA.*

This is a very long, slender Root, free from Knots, about as thick as a Goose-Quill, with a brown wrinkled Bark on the Outside, and white and somewhat mealy within, having a small, tough, stringy Pith in the Middle, of little Smell or Taste. A great many of these long Roots descend from one large Knot or Head. It grows in *Peru* and *Brazil*, and is described by *Piso* under the Name of *Ivapecanga*, being a Species of *Smilax aspera*, having slender prickly Stalks, and long oval sharp-pointed Leaves, of a deep Green on the upper Side, and whiter underneath, with three large Veins and two Claspers set on by them. The Flowers grow in Bunches at the Ends of the Stalk, and are succeeded by small black Berries.

Sarsaparilla is heating, drying, attenuating and sudorific; and particularly useful for the French-Pox, for which it has been accounted a Specific, and much used in Diet-Drinks for that Distemper. It is likewise serviceable against the Gout, Rheumatism, Scurvy, and the King's-Evil, being accounted a Sweetner of the Blood. *Miller's Bot. Off.*

It is of fine Parts, and accounted a Specific for the *Lues Venerea*, Arthritis, Rheumatism, and the like Diseases. Whether Sarsaparilla be specifically different from China Root, I will not, says *Dale*, taking upon me to determine.

[ \* C C ]

*Sarfa-*



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*Sarsaparilla* is a very noted Root, which began to be very much celebrated about the same time with the Root of *China*, as appears from the Epistle of *Vesalius* [quoted under the Article *CHINA*.] It is inferior indeed to Guaiacum, but is generally supposed to be much superior in Virtue to China Root, and even to exceed Guaiacum itself, when after a Course of mercurial Inunctions, and drinking Decoctions of Guaiacum, the Patient is still molested with Ulcers, Rhagades about the Anus, Tophi, Nodes, Ganglia, and Gummata; but especially with Rheumatic Pains, either fixed or wandering, and owing their Original to the venereal Infection, in which latter Case it is esteemed a Specific.

It is imported from several Countries of *America*, and especially from *Peru*, *Mexico*, and *Brazil*, where it is said to grow spontaneously, and plentifully, even in the Hedges. It is generally believed to be the Root of a Plant, the same with the *Smilax Aspera*, or very near akin to the *Smilax*. Hence it is called by the Spaniards *Sarsa-parilla*, or *Zarza-parilla* (that is, a small Vine resembling the Bramble) which is the Name they give the *Smilax Aspera*, as we are told by *Andreas Lacuna*, because the *Smilax* in its Leaves, Branches, and Tendrils resembles the Vines, but in its Thorns and Prickles the Bramble; for *Zarza* in *Spanish* is a Bramble, and *Parilla* a little Vine. This Opinion is, also, favoured by Experience; for it is certain, that the Roots of our *Smilax Aspera* very nearly resemble in Figure those of *Sarsa-parilla*, and almost equal them in Virtue, since we are assured by *Fallopius*, *de Morbo Gallico*, that he made use of the Roots of the *Smilax Aspera* gathered in *Italy*, with happy Success, and cured Multitudes of the Lues Venerea.

*Sarsa-parilla* is prepared in Decoction after the same manner as *China*, that is, by cutting two Ounces of the Root into small Bits, and macerating them a whole Day in six Pints of common Water, after which they boil them over a gentle Fire in a double Vessel well closed with a Lid, till one third, or half, be evaporated. Of this Decoction the Patient is to take a Glass, that will hold ten Ounces, very early in Bed; what remains serves during the rest of the Day for ordinary Drink, and this Course is continued for twenty or twenty-four Days. As to the rest, the Patient is allowed a somewhat greater Latitude in Diet, than under the Use of Guaiacum, and observes, in that Respect, the same Regimen as is prescribed to those who drink the Decoction of *China*. See *CHINA*. *Astruc de Morb. Ven.*

### SARTORIUS.

This is the longest Muscle in the human Body. It is flat, and about two Fingers in Breadth, situated obliquely along the Inside of the Thigh.

It is fixed above by a very short Tendon, in the lower Part of the anterior superior Spine of the Os Ilium, before the *Musculus Fasciæ latae*. The Beginning of its Body lies in the Notch between the two anterior Spines of that Bone.

From thence it runs down obliquely over the *Vastus Internus*, and other Muscles that lie near it, all the Way to the Inside of the Knee, where it terminates in a small Tendon, which grows broader near its Extremity, and is inserted obliquely and a little transversely, in the fore Part of the Inside of the Head of the Tibia, near the Spine or Tuberosity of that Bone, immediately above the Insertion of the *Gracilis Interior*.

The fleshy Body of this Muscle is inclosed in a Vagina formed by an Expansion of the *Fascia Lata*. Its Fibres in general are longitudinal, and where its lower Tendon turns obliquely round toward the Head of the Tibia, it seems to be braced down and secured in its Place, by a tendinous Frænum or Vagina. A little before it is inserted, it detaches a distinct Aponeurosis or tendinous Branch, which runs obliquely downward on the Inside of the Tibia.

The *Sartorius* performs the Rotation of the Thigh from before outward, whether extended or bent; being an Antagonist to the *Musculus Fasciæ Latæ*, and a Congener to the *Quadrigeminus*.

If during this Rotation the Leg be extended, the Toes are turned outward; but if the Leg be bent, it is turned toward the other Leg, as when we lay it over the other Leg or Knee, in the manner that Tailors sit at Work, from whence this Muscle got the Name of *Sartorius*.

It, also, bends the Thigh, or raises it forward; it moves the Pelvis forward on the Os Femoris; and when the Pelvis rests on the two Tuberosities of the Ischium in sitting, it keeps it in that Situation. In this Action it is a Congener to the *Rectus Anterior*; but acts with much more Force, as having its Line of Direction further from the Center of Motion.

Lastly, it bends the Leg, whether it performs the Rotation of the Thigh at the same time or not. In this latter

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Case it is directed by the Co-operation of some Congener, or counterbalanced by the Action of the *Musculus Fasciæ Latæ*.

The Length and Obliquity of its fleshy Portion, the Passage of the inferior Tendon through the Aponeurotic Vagina, the particular Insertion of this Tendon, and the Extent of the Aponeurosis, which it sends over the Tibia, contribute very much to these different Uses.

Besides all these Uses, it may in some Cases assist the *Popliteus*. *Winslow's Anatomy*.

SARX. σαρκ. Flesh.

SASSAF SYRORUM. A Species of Willow that grows in *Syria* and *Egypt*.

SASSAFRAS, Offic. Ger. 1341. Emac. 1525. Park. Theat. 1606. Raii Hist. 2. 1568. *Arbor sive Lignum Pavanum*, J. B. 1. 483. *Arbor ex Florida Ficulneo folio*, C. B. P. 431. *Comusmas odorata folio trifido, margine plano, Sassafras dicta*, Pluk. Almag. 120. *Anhuiba, sive Sassafras Brasiliensium*, Pison. 145. SASSAFRAS.

This is a large Tree, which grows in *Virginia*, and other Parts of the *West Indies*, arising to a good Height before it spreads into Branches. It has two Sorts of Leaves; those which grow on the lower Parts of the Twigs, are oval but sharp-pointed; and those which grow on the upper End are divided into three Sections, somewhat like the Maple. The Flowers are small and yellow, growing in Clusters, and are succeeded by small Berries. The Root is thick and large, covered with an iron-coloured Bark, under which is a light brown, not very hard Wood. It is of a very pleasant Smell, especially the Bark.

The Root with the Bark, which are only used, are heating and drying, and diaphoretic; helps the Scurvy, Gout and Dropsy, and are an usual Ingredient in Diet-Drinks for the Lues Venerea. A Tea made of the Shavings is mightily commended by some against catarrhus Defluxions, and for Shortness of Breath.

Official Preparations are the *Electuarium e Sassafras*, and the chymical Oil. *Miller's Bot. Off.*

It is principally of Use in removing Obstructions, and strengthening the internal Parts, in causing Fertility, and curing the Lues Venerea. It is accounted a Panacea, or sovereign Remedy for Catarrhs. *Dale*.

Much about the same time with the other anti-venereal Woods and Roots, was imported the Wood called *Sassafras*, from several Parts of *America*, but principally from *Florida*, where the Natives call it *Pabamwe*, as we are told by *F. Co-real*, *Voy. aux Ind. Occid.* *Sassafras* is of a reddish Colour inclining to white, ligneous, of a light and rare Substance, contained under a thin Bark, which is ash-coloured without, and sanguineous within, of an acrimonious, sweetish and aromatic Taste, and of a fragrant Smell, whence it is usually called *Lignum Fœniculi*, or *Fœniculatum*, Fennel-Wood.

There was prepared and used a Decoction of *Sassafras*, after the same manner as the Decoctions of *China* and *Sarsa-parilla*; but as *Sassafras* comes next to *China* in the Virtue of curing the Symptoms of the venereal Disease, so it is very much inferior in that respect to *Guaiacum* and *Sarsa-parilla*.

It has been the Custom for a long time past to take the two Woods, *Guaiacum* and *Sassafras*, with the two Roots *China* and *Sarsa-parilla*, which are all of a like Nature and Virtue, and boil them together, generally without any Cathartic, but sometimes with Leaves of Senna, which was the Fashion since the Year 1550, as we are informed by *Brassavolus*, *de Radicis. Chinae Usu*. Of these Drugs in Conjunction then were prepared Decoctions and Bocheta, [See *BOCHETUM*] which were sometimes only diaphoretic and diuretic, but sometimes Cathartico-diuretic, and very commonly known by the Names of *Pisana sudorifera*, or *Pisana e Lignis sudorificis*.

The Proportions of the Ingredients were various, according to the different Intentions which were to be answered. Generally they take two Ounces of Lignum Guaiacum in Dust or small Chips, or many Ounces of Wood of *Sassafras*, cut likewise very small, and the like Weight of the Roots of *China* and *Sarsa-parilla* each, cut into very small Bits, and infuse them warm in ten or twelve Pints of common Water, for twenty-four Hours. After this they add thereto, if it shall be thought requisite, two Ounces of crude Antimony, grossly bruised, and loosely tied up in a Nodule, and boil the whole over a gentle Fire, in a Vessel covered with a Lid, to the Consumption of a third Part; after which they add thereto an Ounce of Scrapings of Liquorice, and, if they would have it purge, half an Ounce of the Leaves of Oriental Senna, which are to boil a Moment. This done, when warm, they strain the Decoction, and set it aside in Glass-Bottles well stopped for Use.

The Custom is to take three Draughts of this Decoction every Day, for twelve or fifteen Days together; the first in the Morning fasting, the next four or five Hours after Dinner, and the last going to Bed; or at least two Draughts, that



that is to say, in the Morning and Evening, omitting the Afternoon's Draught, if it shall be thought proper. During the Time of taking it, the Patient is to be kept to a sparing Diet, and to confine himself at Home, if the Season of the Year requires it. *Astruc de Morb. Ven.*

**SASSIFICA.** A Name for the *Tragopogon*; *purpureo-cæruleum, porri folio, quod Artifi vulgo.*

**SATHE.** *ῥαβη.* The PENIS.

**SATURANTIA.** Absorbents are sometimes thus call'd, because they saturate the Acid residing in the first Passages.

**SATURATIO.** Saturation; in Chymistry it is the perfect Impregnation of an Alkali with an Acid; or of an Acid with an Alkali, so as to render the Mixture entirely neutral.

**SATUREIA.**

The Characters are;

The Leaves are oblong and narrow; the Calyces are small, sharp, several on one Pedicle, and a Pedicle on each Side. The Galea is erect, and bifid; the Beard trifid, and the middle segment crenated. The Flowers are dispersed in the Wings of the Leaves, and not collected into Heads, nor disposed in Whorles, nor growing on ramous Pedicles.

*Boerhaave* mentions nine Sorts of *Satureia*, which are;

1. *Satureia*; *Sativa.* *J. B.* 3. 272. *Boerhaave Ind. A.* 161. *Tourn. Inst.* 197. *Satureia*, *Offic. Satureia hortensis*, *Park. Theat.* 4. *Raii Hist.* 1. 518. *Satureia Aestivalis hortensis*, *Ger.* 461. *Emac.* 575. *Satureia hortensis sive Cunila Sativa Plinii*, *C. B. P.* 218. **SUMMER SAVORY.**

This Savoury has small stringy Roots, from which spring a great many woody Branches, eight or nine Inches high, a little hairy, and having two long narrow Leaves at a Joint, narrowest next the Stalk; the Flowers grow toward the Tops in small Whorles of a whitish Colour with a blush of Red, galeated and labiated, set in five pointed Calyces containing four small dark brown Seeds; it is sown in Gardens, and Flowers in June, the Leaves and Tops are used. *Miller's Bot. Off.*

It is one of those hot and acrimonious Herbs which provoke Urine and the Menstrues, and, supposed to have much the same Virtues with Thyme and Hyssop. *Dale from Ray.*

2. *Satureia*; *montana*; *durior*; flore in pediculis ramosis exalis foliorum. *Boerb. Ind. A.* 161. *Thymbra*, *Offic. Satureia hortensis*, *Ger.* 461. *Emac.* 575. *Satureia vulgaris*, *Park. Theat.* 4. *Satureia montana*, *C. B. P.* 218. *Satureia durior*, *J. B.* 3. 272. *Raii Hist.* 1. 518. *Calamintha frutescens, Satureia folio, facie & odore.* *Tourn. Inst.* 194. **WINTER SAVORY.**

This is more woody and shrubby than the former, having the Leaves more like Hyssop, stiffer and harder, and seemingly pierced full of Holes, and ending in Spinulæ: The Flowers are of the Colour of the former, and the Seed much alike. This is likewise cultivated in Gardens, and Flowers at the same Time.

They are both much of a Nature, being heating, drying, and carminative, expelling Wind from the Stomach and Bowels, and are good for the *Asthma*, and other Affections of the Breast: They open Obstructions of the Womb, and promote the menstrual Evacuations. The Winter-savoury is much used in the Kitchen. *Miller's Bot. Off.*

3. *Satureia*; *Cretica*; folio rigido, brevi, crasso. *Boerb. Ind. A.* 161. *Thymbra vera*, *Offic. Thymbra legitima*, *Tourn. Cor.* 13. *Thymbra Græca* *L. B.* 3. 373. *Thymbra sive Satureia Cretica legitima*, *Park. Theat.* 4. *Satureia Cretica*, *C. B. P.* 218. *Ger.* *Emac.* 576. *Raii Hist.* 1. 519. *Tragoriganum*, *Alpin. Exot.* 78. *An Hyssopum montanum Cilicium quibusdam*, *J. B.* 3. 277? **TRUE SAVORY.**

There are two Species of *Tragoriganum* growing in *Crete* (or *Candy*) one with larger and thicker Leaves and Branches, and rougher Leaves; the other is less, and more slender: Both of them produce from one Root many hard, woody, somewhat rough and slender Stalks, which shoot forth here and there into several small, strait, round and slender Branches, situated at Intervals on each Side of the Stalk; and thick set with small, blackish Leaves, broader than those of Thyme, and generally dispos'd on each Side by Pairs, one Leaf larger than another. The Branches which bear the Flowers are furnished with Leaves, which stand three or more in opposite Order. The Leaves of the greater Species are larger and rougher, being furnished on every Side with rough and somewhat stiff Hairs. The Flowers are dispos'd round the Extremities of the Stalk, and collected into Tufts, as in the *Marrubium*: They are small, of a Sky-blue colour, and have a pleasant Smell, and produce a very small Seed. The Root is small, slender, woody, and divided into other smaller Roots. The whole Plant has a sweet Smell, and is considerably heating and acrimonious to the Taste. *Honorius Belius* believed this Plant to be the *Thymbra*.

It is hot and dry beyond the second Degree. Both the Leaves and Flowers revive the languishing Heat of the Sto-

mach, and corroborate the same, being in some Measure astringent. A Dram of the Flowers or Leaves taken in Wine, or any other Liquor, are an effectual Remedy against cold Diseases. The Plant taken in Wine, or its Decoction drank, effectually promote the Menstrues, heat a cold Uterus; and digest Flatulences. The Leaves boiled in Vinegar; and taken for several Days together, are very successfully used for an obstructed and indurated Spleen. The Decoction of the tender Buds, besides being useful for the Purpose aforesaid, has also, as *Dioscorides* observes, a cathartic Virtue, by which it purges yellow Bile by Stool. *Prosper Alpinus de Plantis exoticis.*

4. *Satureia*; *Cretica*; folio rigido, crassiore majore: *Tragoriganum, Creticum, folio & ramo majori crassiorique, foliis asperioribus.* *Alpin. Exot.* 79.

5. *Satureia*; *spicata.* *Offic. C. B. P.* 218. *Boerb. Ind. A.* 161. *Satureia Sti. Juliani*, *Ger.* 461. *Emac.* 576. *Raii Hist.* 1. 518. *Satureia spicata Sti. Juliani*, *Park. Theat.* 4. *Satureia foliis tenuibus, sive tenuifolia Sti. Juliani quorundam*, *L. B.* 3. 273. *Satureia tenuifolia Sti. Juliani quorundam; Thymbra vera, sive genuina aliis*, *Chab.* 423. *Thymbra Sti. Juliani, sive Satureia vera Lobelio.* *Tourn. Inst.* 198. **ROCK SAVORY.**

It grows on Hills and Walls, flowers in Summer, and agrees in Virtues with the rest of the Savories. *C. Bauhine* takes this for the *Saxifraga prima Matthioli*, but *Parkinson* makes it a different Plant.

6. *Satureia*; *Cretica*; angusto, oblongo folio, in pediculis ramosis exalis foliorum. *Calamintha, Cretica, angusto, oblongo folio.* *T.* 194. *Clinopodium Creticum.* *Alpin. Exot.* 265.

This Plant shoots up with six, or perhaps more or fewer, strait, round, slender Stalks, to the Height of a Span, and thick set with Leaves, in Size, Figure, and Odour resembling those of *Serpyllum*, and disposed in opposite Pairs, at very small Intervals. Between the Leaves and the Stalks are produced the Flower, two or three together, of a vinaceous Colour; from which proceed every minute Seeds. The whole Plant has the Smell of *Serpyllum*, only sweeter, and has a hot Taste. The Root is long, slender, and woody, and without Smell or Taste. They who sent us the Seeds of this Plant from *Crete*, call'd it by the Name of *Sexifraga*; because it is celebrated for its extraordinary Virtue in breaking the Stone in the Kidneys and Bladder. But it seems to us to agree well enough with the Characters of the *Clinopodium* of the Antients, which is described by *Dioscorides* to be a shrubby Plant, with Leaves like those of *Serpyllum*, ramous, two Spans in Height, and growing in rocky Places. The Flowers, which grow at Intervals like those of *Marrubium*, by their Disposition resemble in some measure the Feet of a Bed. From the Description, we are persuaded that this Plant of ours is most like *Clinopodium*, especially on Account of the Likeness of its Leaves to those of *Serpyllum*; but if it had Flowers, also, like those of that Plant, and trailed on the Ground, we should have made it a Species of *Serpyllum*.

This Plant, from its Taste and Smell, appears to us to be of a heating and drying Quality, beyond at least the first Degree, which is farther evident from the Fineness of its Parts, with some slight Measure of Astringency. We may therefore rationally suppose it to be of good Service to the Stone and Gravel, and other nephritic Disorders, though as yet we are unacquainted with its true Uses in Medicine. *Prosper Alpinus de Plantis Exoticis.*

7. *Satureia*; *Virginiana*; *Par. Bat. Thymus, cephalotes, autumnalis, longiore folio.* *T.* 196. *Serpentaria Virginiana.* *Bocc. Mus. P.* 2. 161. *Tab.* 108. 115.

8. *Satureia*; *major*; *frutescens*; *verticillis densissimis.* *Tragorigani secundi altera Species.* *Clus. H.* 355.

9. *Satureia*; *an Cretica*; *spicata.* *Sherard. H. Mauror?* *Boerb. Ind. Alt. Plant. Vol. I.*

Savory is of a very hot, penetrating, and aromatic Taste, whence it is of Service in all Diseases in which Water and an inert Phlegm are predominant; as also in Expulsion of Humour, and corroborating the Parts. It has a mighty Influence in moving the Nerves, stimulates to Venery, excites Thirst, prevents Sleep, and causes long Watchings. It is of Service in Obstructions of the Menstrues, and an Ischury; or Retention of Urine. It is to be observ'd, however, that the too free Use of it excites bloody Urine, which is succeeded by an Hemoptoe; it is therefore very pernicious in all Hemorrhages, but is excellent Seasoning for farinaceous Foods, as Beans, and the like; and is accounted one of the best Antiscorbutics, and highly commended against pituitous Diseases, and the Dropsy. It is a very serviceable Plant in Affections of the Stomach, or Crudities and loss of Appetite, and sharpens the Sight. Externally, it cures Pains of the Ears, dissolves Cold Tumours, and strewed in Beds, is said to kill the Fleas. *Hist. Plant. ascript. Boerhaave.*



# S A T

SATURNUS, Lead. See PLUMBUM.

SATYRIACE, *σατυρίακη*. The Name of an Antidote described by *Paulus Aegineta*. L. 7. C. 11.

SATYRIASIS, *σατυρίασις*. Is a violent Desire of Venery, attended with a Tension and Rigidity of the Pudendum, occasioned by a morbus Disposition of the Body. It takes its Name, as some will have it, from the Relation it bears to *Satyrus*, who, according to the Report of Fable, and the Talk of the common People, are a Kind of Demons extremely addicted to Wine and Venery; or, as others say, from the Herb *Satyrion*, which has an extraordinary Virtue of exciting venereal Desires, accompanied with a Rigidity of the genital Parts.

Antecedent Causes of this Disorder are, Medicines taken as Provocatives to Venery; these are called *Satyrica* [according to the former Etymology] or *ἐντατικά* (*entatica*. See ENTASIS.) which are acrimonious, incentive, and prejudicial to the Nerves. Or the Disease may be occasioned by an intemperate and unseasonable Use of Venery.

The *Satyriasis* is an Affection common to both Sexes, and mostly incident to the Young and Middle aged; for the Vigor of Age is continually prompting to venereal Exercises.

The Patient under this Disorder is affected with a vehement Tension and Rigidity of the Pudenda, attended with a Pain, a burning Heat, and an immoderate and urgent Itching and Stimulation to Venery; besides a Depravation of Reason, a quick Pulse, very short Breath, Despondency, want of Sleep, Deliriousness, Thirst, loathing of Food, difficult Evacuation of the Urine, so as generally to occasion a Retention of the Fæces, and sometimes a Fever. There is in all universally a Contraction of the Nerves, which the *Greeks* call *σπασμός*, *Spasmus* [Convulsion] and involuntary Ejection of the Semen. At first they fancy themselves in some measure relieved by the Use of Venery, and the Discharge of Semen; but soon after they are afflicted with a more violent Extension of the Parts, for they are much incommoded and injur'd by this short Gratification, tho' they fancy themselves relieved for a short Space of Time, in the same Manner as those who are affected with the Itch or Soreness of the Eyes would frequently be rubbing the Parts, and imagine they find some Ease, though but for a Moment, in what the *Greeks* call *χειραπεία* (*Chirapsia*, from *χῆρ*, the Hand, and *ἅπτομαι*, to touch) "the Touch of the Hand." In the Decline of the Disorder, all the beforemention'd, by the *Greeks* called *συμπτώματα* (*Symptomata*) Symptoms, and by us *Accidentia Passionis*, "the Accidents of the Disease," are abated.

All the abovementioned Symptoms are, also, incident to Women labouring under this Disorder; but in them the *Pruritus* is more prevalent by Nature, and to such a Degree, that without any Sense of Shame they apply their Hands to the Parts, and beg of every Man who approaches to gratify their Inclination.

A *Satyriasis* is different from a *Gonorrhœa*, which we call *Seminis Lapsus*, "a Flux of the Semen;" for this latter is an involuntary and continual Efflux of the Semen, without a Tension of the Pudendum. Neither is a *Satyriasis* one of those slow Diseases which the *Greeks* call *χρόνια*, *chronia*, chronic, nor in any respect like what the *Greeks* call *πριαπισμός*, *Priapismus*, a Disorder mentioned by *Demetrius Attaleus* in his Book of Signs, who relates that he observ'd it in an old Man, who labouring at Masturbation, could perform nothing, and was affected with an excessive and somewhat painful Tension of the Pudendum, so as to pass for a Horn, in which State it continued for many Months, without yielding to Medicines, but was by Length of Time, and slow Degrees, reduced to its primitive and natural State. But a *Satyriasis* is an acute Disease, and continues not long upon the Patient; but consists, as I said, in a Convulsion of the Nerves, and an ardent and stimulating Desire of venereal Pleasure. It is therefore a Disease of Stricture, and of an acute and vehement Nature; for the whole Frame of the Nerves is affected, as we may judge by the disorder'd State of the Mind, and the Convulsions of the Members: But the Parts which seem to be principally affected, are the seminal Passages, or Duets, called by the *Greeks* *πόροι σπέρματικοί*, (*Pori spermatici*), and those which are more immediately concern'd in the Act of Coition.

In our Method of Cure we order the Patient to live in a warm Place, silent, and free from Noise, with his Buttocks and Pudenda, as far as the *Pubes*, which the *Greeks* call *ἦψον*, (*etron*) wrapped in fine Wool, forbidding all Visits, especially of young Women; for the Sight of a fair Vilitant proves an Incentive to the Sick, who perhaps could not when in his right State of Health converse with such desirable Objects without unchaste Emotions. At the Approach of the Fit, it will be proper to take some Hold of the Patient by the Joints, and to keep off his Hands from the affected Parts. When the Fit is come to its Height, we apply Wool

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expressed out of sweet and hot Oil, or a Decoction of Fenugreek, Linseed, or Marshmallows. After the Remission of the Fit, we think it convenient to use Phlebotomy, on account of the Violence of the Symptoms, and that within the *Diatritos*, [see that Word] if there be a Necessity for it, or on the *Diatritos*, if there be no such urgent Occasion. By Remission of the Fit we understand, if there be a Fever accompanying the Disorder, the Remission and Abatement of the Fever. For it is necessary, in such a Case, that when the Disease is exasperated, the Fever should be increased; and when that is mitigated, this also should be diminished. But when there is no Fever, we judge of that Remission by the Mitigation of those other Accidents, called by the *Greeks* *συμπτώματα*, Symptoms, as Redness, Heat, Itching, or venereal Longings, or the rigid Tension of the Pudenda, or the like. After Phlebotomy, we anoint the Body all over; and having washed out the Mouth and Fauces, we give the Patient *Halica* (*Alica*) in Honey, or Bread sop'd in Water, and poach'd Eggs. On other Days, to those Parts which we had covered with Wool, we apply a Cataplasm prepar'd of the Seeds of Fenugreek and Linseed, or Flour soak'd in Water, which the *Greeks* call *ἀμύνη λυσιν*, (*amen lysin*, a crude Solution) or in Water and Honey. At the same Time we apply Cupping-Glasses, in the Time of the Fit, without Scarification; but at Intermittions we scarify the Buttocks, and the Pudenda to the Pubes, shaving off the Hairs. We apply also *Lenches*, and use Vaporation with Sponges, having first boiled some Laxatives in the Water. We administer also a Clyster of warm Oil, or warm Water and Oil, and then renew the Cataplasm before Meat. Besides these Means we also make Use of an Encathisma, (*Semiciupium*) sometimes prepared of Oil, or of warm Water and Oil, and sometimes of lenient and laxative Decoctions. For Women we prescribe a Pessary to be dipped in warm Oil, and to be gradually introduced into the Vagina by the Hands of some experienced Person of the Female Sex, and cover the whole Breadth of the external Parts with Wool, or a Cataplasm, and apply Cupping-Glasses to both Alæ of the Pudendum. In the Decline of the Disease we advise Gestation, and bathing in Oil or warm Water, in a Tub or Vessel for that Purpose, with the frequent Use of the Bagnio, and a proper Diet, consisting of Variety of Foods of good Juices, prohibiting acrimonious Things, strong Broths and Wine for a considerable Time; we also apply Cerates to the Parts affected. For the Female Sex we order more liquid Compositions, and inject them by Way of Clyster, with the Use of Pessaries, composed of Fats, Marrow, Melilot, or the like, of which we shall treat more at large in the Book we design to write on the Diseases of Women.

None of the Physicians, except *Themison*, have treated of this Disease, though it does not only happen very frequently, but has been known to be very common. *Themison* informs us, that in *Crete* many Persons died of the *Satyriasis*, which we may suppose to be occasioned by an Error in Diet, and their too frequent and plentiful eating of the Herb *Satyrion*. He tells us farther, that at *Milan* he saw a young Woman, modest in all other Respects, and Wife to a Person of Quality, destroyed with a *Satyriasis*. And in the second Book of his Epistles to *Asilius*, he proposes a Method of Cure, in which he prescribes Phlebotomy, Fomentations, and refrigerating Cataplasms, in order to extinguish venereal Desires; he advises, also, drinking cold Liquors; all which Directions are incongruous, and inconsistent with one another. For that Relaxation and Remission, which are effected in the Body by Phlebotomy, are contrary to the Constriction and Condensation of the Parts which are procured by the Cataplasms and Fomentations with cold Liquors. Since, therefore, the Desire and Delights of venereal Pleasures are owing to an Inflammation [*Tumor* in the Language of *Cælius* and the *Methodici*] of the Pudenda, as well as the Disorder of Reason to an Inflammation of the Membranes of the Brain, the Inclinations to those Pleasures must be heighten'd, and even doubled, by the Use of Coolers and Constringents. *Cæli Aurelianus* L. 3. C. 18. *Acut.*

The same Author, *Chron.* L. 5. C. 11. gives us the following Account of a Priapism.

An Erection of the Penis, without any concomitant Pain, or the Consent of other Parts, is called a Priapism; because the Penis, in this erected State, resembles that of the lewd and infamous God *Priapus*. *Demetrius Apameus* makes mention of this Disorder, in his Book concerning the Signs of Diseases; for he informs us, that a certain old Man used the unnatural Practice of Masturbation, without ever being able to procure an Emission of Semen; whilst, at the same time, the Erection, which was accompanied with a small Pain, and continued for several Months, was so great, that the Penis resembled a Horn. This Man's Misfortune would yield to no Medicines, but ceased slowly, and after a long Time; a Circum-



Circumstance which sufficiently distinguishes a Satyriasis from a Priapism, since the former is quickly over, and does not long afflict the Patient, because it is produced by a Distension of the Nerves, and a violent Desire or Stimulus to Venery. Whereas a Priapism may be conceived to be a Palsy of the femoral Vessels and other Nerves, distributed to the Parts about the Penis, by the Distension of which the Patient is subjected to this Misfortune. *Caelius Aurelianus Morb. Chronic. Lib. 5. Cap. 9.*

Doctor *Cheyne*, in his Treatise concerning the Nature of a Fibre, describes a certain Species of the Satyriasis in the following manner.

Among convulsive Disorders, says he, there is one so rare and uncommon, that I don't remember to have read any thing remarkable about it; and I never saw but three Persons afflicted with it. Those who are fond of reducing Diseases to certain Classes, refer it to a Satyriasis, a Disorder treated of by all who have wrote Systems of Physic. But from the Descriptions given by these Authors, a Satyriasis, though not of the venereal Kind, appears to be among the Number of inflammatory Disorders; and to be incident to young and vigorous Persons, especially those of a salacious Turn, and such as have wantonly indulged themselves in the Gratification of their Lust. Whereas the Disorder of which I treat is incident to the Infirmary, to Persons of weak and lax Fibres, to such as digest their Aliments slowly and imperfectly, to the Hypochondriac, to such as are distended with acrid Flatulences, and those who are sad and dejected. This Disorder is rarely troublesome to the Patient in the Day-time, but principally in the Night, especially after the Person becomes first warm in Bed, at which time he is seized with a violent Inflation and Tension of the Penis, as if an Attempt was made to pull it off; though, at the same time, he is not stimulated to lust, because the intense Pain is more than a Balance for every lascivious Idea, which is so far from being grateful, that it is rather observed to be disagreeable to him. In this Case the only Circumstance which procures an Alleviation of the Pain, is to get out of Bed, and expose one's self to the cool Air, by which means the Inflation immediately subsides; for which Reason the Disorder to me seems to be of the convulsive kind, and not to be different from the Spasms of other Members, which are pretty frequent and well known. But in such Patients this Member is (perhaps) principally seized with Spasms, either because its Fibres are more easily irritated, or through some Fault or Piece of Imprudence in the Patients themselves. Besides the Pain arising from the Convulsions, there is another Circumstance highly detrimental to the Constitution, which is that the Paroxysm of the Disorder happens principally at that Time, when the Patient being moderately warm in Bed, begins to be inclined to sleep, which is interrupted by his being forthwith obliged to get out of Bed; so that he is not sufficiently recruited by Rest, but his Appetite and Digestion becoming languid, and he himself being in a few Weeks rendered more like a Spectre than a Man, is ready to do or suffer any Thing for the sake of Sleep, which in this Case is not easily procured, since both Opiates and all hot and cardiac Medicines increase the Disorder. Every Time it has occur'd to me in Practice, I have attempted its Cure in the same manner with other convulsive Disorders, by a Repetition of gentle Emetics according to the State of the Patient; when the Disease began to return, by persisting for six Months in the Use of Milk of Sulphur, *Aethiops Mineral*, and *Cinnabar of Antimony*; by a shorter and scanty Use of volatile Medicines; such as Flowers of Benjamin, and Salt of Harts-Horn; by a slender Diet long protracted, three or four Ounces of Flesh, for instance, each Day; a small Quantity of red Wine mixed with Brissol-Water; and, lastly, by the Peruvian Bark, and the exterior Part of Orange Peel, and a few Grains of the Vitriol of Mars. By these Medicines, and this Regimen, by moderate Exercise, and frequent Immersions in cold Water, in two Years time, I perfectly cured two of the Patients I found afflicted with this Disease. The third, who, as he was advanced in Years, would not submit to the Labour and Length of a Cure, tho' he generally lives free from the most troublesome Symptom of his Disorder, is nevertheless subject to a Relapse, if he at any time indulges himself in high Living. See *PENIS*.

**SATYRIUM.** A Name for several Species of *ORCHIS*, which see.

**SAVICH.** An *Arabic* Word, importing a subtile Meal, or Powder. *Castellus from Valesens de Tarenta.*

**SAUNIA.** The Name of a Composition made into a Mass like a Leaf, of Sweet-Almonds and Sugar, each one Pound; of *Amylum*, half a Pound, and of Oil of Sweet-Almonds, an Ounce and a half; this Mass was made into small oblong Leaves, of an Ounce Weight each. *Castellus from Clementinus Clementius.*

**SAVONEA.** The Name of an Arteriacal or Bechical Confection in *Forellus*.

**SAURE,** according to *Blancard*, is the *NASTURTIIUM*.

**SAURURUS.** *Lizard's Tail.*

The Characters are;

The Leaves are like those of the *Arioides*. The Flower is apetalous, furnished with two Stamina, and hermaphrodite. The Ovary is of an oval Form, soft, monospermous, and furnished with a trifid Tube. The Flowers and Fruit are disposed in long, slender Spikes.

*Boerhaave* mentions four Sorts of *Saururus*, which are;

1. *Saururus*; arborescens; fructu adunco. *Plum. Pl. Am.* 58. *Fig. 77.*
2. *Saururus*; frutescens; foliis Plantagineis; fructu breviori. *Plum. Pl. Am. Fig. 76.*

3. *An Saururus hederaceus*; cauliculis maculosis; major. *Plum. Pl. Am. 50. Fig. 66?*

4. *An Saururus hederaceus*; cauliculis maculosis; minor. *Plum. Pl. Am. 5. Fig. 67?* *Boerb. Ind. Alt. Plant. Vol. 2.*

The Name *Saururus* is from *σαῦρα*, (*Saura*) a Lizard, and *οὐρά* (*Ura*) a Tail. Its Virtues are the same with those of the *Arum* and *Arioides*. *Hist. Plant. Ascript. Boerhaave.*

**SAXIFRAGA.**

The Characters are;

The End of the Peduncle becomes a tubulated Calyx, which has deep Incisures in the Saxifrage, but less deep in the *Geum*, and is quinquesid. The Flower is rosaceous and pentapetalous, arising from the Circumference of the Ovary, and furnished with eight or ten Stamina. The Fruit is roundish, horned, bicapsular, and full of small Seeds. In the Saxifrage it grows together with the Calyx, but in the *Geum* is supported thereby.

*Boerhaave* mentions thirteen Species of *Saxifraga*, which are, first, those with a roundish, crenated, and tender Leaf.

1. *Saxifraga*; rotundifolia alba. *C. B. P. 309. Raii Synop. 3. 354. Tournef. Inst. 252. Boerb. Ind. A. 222. Saxifraga alba*, *Offic. Ger. 693. Emac. 841. Raii Hist. 1048. Saxifraga alba vulgaris*, *Park. Theat. 424. Saxifraga alba radice granulosa*, *J. B. 3. 706. Sedum bicornis, album, rotundifolium, erectum, radice granulosa*, *Hist. Oxon. 3. 473. Sanicula radice granulosa, flore albo*, *Herm. Cat. Hort. Lugd. Bat. 535.*

**WHITE SAXIFRAGE.**  
The Roots of White Saxifrage consist of several small, red-dish, round Grains, with a few small Fibres mixed among them; from which spring thick, hairy, half-round, whitish, green Leaves, set on very long foot Stalks, and crenated about the Edges. The Stalks grow to be a Foot or more high, somewhat hairy, and branched at the Top; on which grow Spikes of white five-leaved Flowers, with several white Apices. The Seed is very small, included in two-horned and roundish Seed-Vessels. It grows in Meadows, and flowers in *April* and *May*. The Herb and the granulated Root is used.

This Plant has its Name from its supposed Virtues, being diuretic and lithontriptic, good for the Stone and Gravel, and Stoppage of Urine.

The only Official Preparation is the simple Water. *Miller's Bot. Off.*

This Plant is esteemed a great Diuretic. Its Roots may be either used in White Wine, or a Decoction may be made of them in common Water. *Fuchsius* affirms, that it provokes the Terms, and attenuates the dense gross Lymph, which hinders the ordinary Motions of the Lungs. *Marlyn's Tournefort.*

It is said to be good in Obstructions of the Menfes.

2. *Saxifraga*; rotundifolia; alba; flore pleno.
3. *Geum*; rotundifolium; majus. *T. 251. Sanicula, montana, rotundifolia, major. C. B. P. 243. Sedum bicornis, montanum, serratum, hederaceo folio, majus, guttato flore, M. H. 3. 476.*
4. *Geum*; folio circinato; pistillo floris pallido. *T. 251. Sanicula Alpina, Cotyledonis fœcis rotunda, umbilico pallido, Flor. 2. 97.*
5. *Geum*; folio subrotundo, minori; pistillo floris rubro. *T. 251.*
6. *Geum*; folio oblongo, crenato; fructu & cauliculis ruberrimis; flore pallidulo, tubris guttulis adperso.

The three following have oblong serrated Leaves, resembling those of the *Aizoides*.

7. *Saxifraga*; sedifolia; flore albo; multiflora. *T. 252. Sedum, serratum, flore albo, multiflorum. Ac. Reg. 113. Sanicula, Pyrenaica, longifolia, multiflora, elegantissima.*

8. *Saxifraga*; sedifolia, angustiore, serrato. *Tournef. Inst. 252. Boerb. Ind. A. 222. Umbilicus Veneris alter, Offic. Umbilicus Veneris minor, Ger. Panac. 529. Cotyledon alba minor, Park. Parad. 232. Cotyledon media foliis oblongis serratis,*



C. B. P. 285. *Sedum ferratum*, I. B. 3. 689. Raii Hist. 2. 1045. SMALL NAVEL-WORT.

This Plant is found in the Mountains of Germany, and flowers in Summer: It agrees in Virtues with the *Sedum majus vulgare*.

9. *Saxifraga*; foliis subrotundis, ferratis. T. 252. *Colyledon*, minor, foliis subrotundis, ferratis. C. B. P. 285. Prodr. 132. I. B. 3. 690.

10. *Saxifraga*; muscosa; trifido folio. T. 252. *Sedum*, *Alpinum*, trifido folio. C. B. P. 284.

11. *Saxifraga*; alba; petræa; Ponæ. in Fol. 337. T. 252. *Trydaetylites Alpina*. I. B. 3. 762. *Sedum*, *tridaetylites*, *majus album*. C. B. P. 284. M. H. 3. 479.

12. *Saxifraga*; *tridaetylites*; Alpina; pallidè lutea. T. 252. *Sedum*, *tridaetylites*, *Alpinum*, pallidè luteum. C. B. P. 284.

13. *Saxifraga*; verna; annua; humilior. Tourn. Inst. 252. Raii Synop. 3. 354. Boerb. Ind. A. 223. *Paronychia rutaceo folio*. Offic. Ger. 499. Emac. 624. *Paronychia foliis incisiss*, Park. Theat. 556. *Tridaetylites tectorum flore albo*, I. B. 3. 762. *Sedum Tridaetylites tectorum*, C. P. B. 285. *Alpine Tridaetylites tectorum*, Herm. Hort. Lugd. Bat. 20. *Sanicula aizoides Tridaetylites murorum*. Pluk. Almag. 331. RUE WHITLOW GRASS.

This is a small, low Plant, seldom above three or four Inches high, usually of a reddish Colour: The Leaves are thick, fat, and somewhat clammy, divided into three Parts at the End, whereof the Middlemost is largest: They are hairy as well as the Stalks, which are a little branched, having on their Tops small, white, five-leaved Flowers. The Seed-Vessels are round and swelling, and contain very minute Seeds. The Root is small and fibrous. It grows on the Tops of Walls, and low Houses, flowering in April, and perishing by the Summer's Heat, arising yearly from the scatter'd Seed.

This Plant is accounted a specific against the King's-Evil being very much commended by Mr. Boyle for that Distemper: And Sir John Colebatch, in his Essay upon Acids and Alcalies makes mention of a poor Girl at Worcester afflicted with scrophulous Ulcers, who received great Benefit from it. Miller's Bot. Off.

I myself, says Boyle, have often gathered an unpromising Plant, called Rue leaved Whitlow-Grass, which slightly infused in Beer, to my Knowledge, lately, without Pain, and in few Days, cured a Kinsman of Sir Kenelm Digby of the King's-Evil: Yet I don't find any Botanist recommend it for that Distemper.

A Physician, says Boyle, whom I knew, was sent for to a scrophulous Patient, in whose Throat he found a Tumour so large, and so unluckily seated, that greatly compressing the Oesophagus, it render'd Deglutition exceedingly difficult; the Tumour was, also, hard and stubborn, as not to be dissolv'd nor brought to a Suppuration; whence the Patient was put in imminent Danger of being starv'd. In this Strait, the Physician remembering the Character I had given of Whitlow-Grass, sent about the Country to get all that could be procured, and first gave a little of it, in the Form of Infusion, in such liquid Aliments as the Patient was able, though with great Difficulty, to get down; and having by this Means, after some Time, gradually made the Deglutition more easy, he gave the Remedy in greater Plenty, to impregnate the whole Mass of Blood and Juices of the Body with the Virtue of the Herb, whereby the Tumour was at length dissolved, and the Patient cured.

The first, seventh, and eighth are possess'd of a nitrous, balsamic, and saponaceous Quality. Hist. Plant. Boerb. ascript.

SAXIFRAGA, is also a Name for several Sorts of *TRAGOSELINUM*, which see.

SAXIFRAGA MONTANA. A Name for the *Fæniculum*; *tortuosum*; and for several Sorts of *Seseli*.

SAXIFRAGA, ROTUNDIFOLIA, AUREA. A Name for the *Chrysosplenium*; *foliis amplioribus, auriculatis*; and for the *Chrysosplenium*; *foliis minoribus, subrotundis*.

Besides the foregoing Sorts of *Saxifraga*, Dale mentions the two following.

1. *Saxifraga antiquorum*. Offic. *Saxifraga antiquorum quibusdam*, I. B. 3. 338. Raii Hist. 2. 1033. *Saxifraga antiquorum quibusdam*, *Gypsophyton*, & *Symphytum petræum*, Chab. 443. *Saxifraga magna Matthioli*, Ger. Emac. 605. *Saxifraga major Italorum Matthioli*, Park. Theat. 426. *Caryophyllus Saxifragus*, C. B. P. 211. *Lychnis minor Saxifraga*, Tourn. Inst. 338. THE GREAT SAXIFRAGE OF MATTHIOLUS.

It grows on the Top of Mount Lups, and flowers in June. The whole Plant is admirably endu'd, as Matthioli says, with the Virtue of breaking and expelling the Stone.

Dioscorides describes his Saxifrage to be a ramous, shrubby Plant, growing in rocky and rugged Places, and like Epi-

thymum; which is so short a Description as to give Occasion for much Controversy among Authors, and for many Plants of quite different Kinds to be taken for it, or to be call'd by its Name. In our English Shops there are two Sorts of Plants known by the Name of Saxifrage, and used accordingly. These are the *Pimpinella Saxifraga*, or *Burnet Saxifrage*, and the *Saxifraga vulgaris*, or *Meadow Saxifrage*; but neither of them agrees with the Description of *Dioscorides*, though the same Virtues are ascribed to them by Authors. But we are to enquire what Plant was the true Saxifrage of the Antients. Matthioli and Lugdunensis will have it to be a Species of *Savory*, which C. Bauhine takes to be the same as the *Thymra S. Juliani Lobeliana*. Our Parkinson proves, that the *Saxifraga vera* of Matthioli, and the *Thymra S. Juliani* of Lobel, are very different; and therefore censures C. Bauhine as mistaken in making both of them synonymous, or the same, with his *Satureia spicata*; and assures us, that the Plant which he saw and tasted (for the *Saxifraga vera Matthioli*) did not at all agree, either in Smell or Taste, with the *Satureia* or *Thymus*, but came nearer to his (Bauhine's) *Thymum inodorum*. Dodonæus and Gerard take the *Serpyllum vulgare* for the Saxifrage of *Dioscorides*; but Parkinson supposes them all mistaken, and I should think he was in the right for rejecting the Judgment of the forementioned Authors, did he not pertinaciously adhere to the *Saxifraga vera* of Matthioli, since there is another Plant in the same Author, which is more likely to be the Saxifrage of *Dioscorides*, for which Reason we have exhibited it above as such. For its admirable Virtue in breaking and expelling the Stone, the Reader may consult Matthioli himself, who was convinced of the same not only by his own Experience, but also by the Testimony of *Calceolarius*, an Apothecary of Verona, who first communicated it to him. Dale.

2. *Saxifraga Dioscoridis*, Matth. fol. 976. *Saxifraga vera Dioscoridis*, C. B. Meth. 693. Lugd. 4. *Saxifraga*, Matth. Comp. 642. Cam. Epit. 716. *Saxifraga vera Dioscoridis Matthioli*, Park. Theat. 426. THE TRUE SAXIFRAGE OF DIOSCORIDES ACCORDING TO MATTHIOLUS.

It grows on Rocks and stony Places. The Herb boiled in Wine is good in feverish Disorders; it is, also, serviceable in the Strangury, cures the Hiccough, breaks the Stone in the Bladder, and provokes Urine.

These are the Virtues which *Dioscorides* ascribes to his Saxifrage; but in my Opinion they were not intended for this Plant, and therefore we have only followed Matthioli in ascribing them to this above. What was the true Saxifrage of the Antients I have endeavoured to shew under the SAXIFRAGA ANTIQUORUM, and suppose the Virtues abovementioned to belong to that Plant. Many Botanists are not satisfy'd as to the Plant we have given above, nor know where to fix the Name, and some suspect it. Dale.

SAXIFRAGA. Medicines which have the Power of dissolving, or breaking the Stone. The same as Lithontriptics.

SAXONICUS PULVIS. This Powder is prepared in the following Manner. Take of the Roots of recent Garden Angelica four Ounces; of the Roots of wild Angelica, Marsh-mallows, and Polypody of the Oak, each two Ounces; of the Roots of common Nettle and Swallow-wort, each one Ounce; of Valerian Root half an Ounce; and of the Bark of the Root of German Mezerion an Ounce and an half.

These when cut down are to be put into a glas'd Vessel, and such a Quantity of strong Vinegar is to be poured upon them as to rise two Inches above them: Then the Vessel is to be close stopp'd, and the whole boil'd over a gentle Fire: Then the Vessel is to be open'd, the remaining Vinegar thrown away, and the Roots dried till they can be reduced a Powder, to which are to be added twenty-four of the Berries of the Herba Paris, also pulveriz'd.

This Medicine is highly esteem'd against Poisons, the Plague, and other malignant Disorders. It purges violently on account of the Bark of the Root of the Mezerion. The Dose is from half a Scruple to two Scruples, or a Drachm.

In this Preparation, it seems sufficient to correct the Bark of the Root of the Mezerion, and in some measure deprive it of its corrosive Acrimony, by boiling it in Vinegar; but as the other Roots have nothing of a malignant Nature, their most volatile and essential Parts are carried off by boiling; so that by impregnating them with the Acid of the Vinegar, the remaining Part of their volatile Principles is fix'd; for which Reason 'tis sufficient to dry them in the ordinary Manner. The Quantities of Ingredients, and the Manners of preparing this Powder, are different in different Authors. It borrows the Epithet *Saxonicus*, from Saxony, where it was first invented; but it is only used in

Germany,



Germany, since it would be too violent for Persons of a less robust and hardy Make. *Lemery. Pharmacop. Universelle.*

SBESTEN. Quick Lime. *Ralandus.*

SCABIES. The Itch. See LEPRO.

SCABIOSA.

The Characters are;

The Calyx is expanded in Manner of a Star, deeply jagged, and consists of a double or tripple Order of Scales lying one upon another. The exterior Order of Floscules consists of larger Floscules than the rest, and those generally bilabiated; but those which are contained in the Middle, within the others, are quadrifid or quinquefid. The Top of the Ovary has a hairy, foliaceous, or acculeated Crown, in Manner of a Calyx, surrounding the Flower, which grows in the Apex. The lower Part of the Ovary grows in a globous Placenta.

*Boerhaave* mentions forty eight Species of *Scabiosa*, which are;

1. *Scabiosa*; *Africana*; *frutescens*. *Par. Bat. Ic.* 219.
2. *Scabiosa*; *Africana*; *frutescens*; *maxima*, *foliis rugosis & crenatis minor*. *Par. Bat. Defcr.* 220.
3. *Scabiosa*; *Africana*; *frutescens*; *maxima*; *foliis tenuissimè incisis*.
4. *Scabiosa*; *Alpina*; *folio Centaurii majoris*. *C. B. P.* 270. *Scabiosa, centauroides*. *Alpin. Exot.* 205.

I received as a Present from *Naples* a Plant, which I took for a Species of the *Centaurium majus*, which it very much resembles in Leaves; for it sends forth from its Root many large and blackish Leaves, so like those of the *Centaurium majus*, that every one took it for that Plant the first Year: But in the second Year it produced several naked, slender, round, rushy, strait Stalks, two Cubits in Height, or more, bearing on the Top round Heads, very like those of *Scabious*, as are also the Flowers, which are of a yellow Colour; and the Seeds, which are long and black, no less resembling those of that Plant. The Root consists of a Multitude of long, slender Fibres, proceeding from one Origin. From the Heads, Flowers, and Seeds, we thought we had Reason to reckon this Plant a Species of *Scabious*, and accordingly distinguish'd it by the Name of *Scabiosa Centauroides*, on account of the Resemblance of its Leaves to those of the *Centaurium majus*. The Seeds are intensely bitter, from which Quality the Moderns have generally infer'd of the several Species of their *Scabiosa*, that they are of a heating Properties. Hence it appears that this, as well as the other Sorts of *Scabious*, are heating and drying to a considerable Degree; and cut and deterge gross Humours, by which Means they are very effectual in opening Obstructions of the Viscera. For these Purposes some exhibit a Decoction of the Seeds, or of the Roots, in Water; and also, for the Scabies, or Itch, and for the French Pox. Some have bestowed high Commendation on the expressed Juice of the Leaves or Roots, or the Decoction of the Roots, or the Powder of the Seeds with a little old Theriaca, as Sudorifics in pestilential Fevers; of all which Properties and Virtues we suppose our *Centauroides*, since it is endu'd with the same Bitterness, to be possess'd. This Plant endures the Frosts in *Italy*, and is perennial. *Prosper Alpinus de Plantis Exoticis.*

5. *Scabiosa*; *pratensis*; *hirsuta*; *quæ Officinarum*. *C. B. P.* 269. *Tourn. Inst.* 464. *Boerb. Ind. A.* 129. *Scabiosa*, *Offic. Scabiosa major vulgaris*, *Ger.* 582. *Emac.* 719. *Scabiosa vulgaris pratensis*, *Park.* 484. *Scabiosa major communior hirsuta, folio laciniata*. *I. B.* 3. 2. *Raii Hist.* 1. 374. *Synop.* 3. 191. SCABIOUS.

The lower Leaves of *Scabious* are rough and hairy, four or five Inches long, an Inch or more in Breadth, sometimes deeply cut in, and often almost whole, and without any Incisions, upon breaking asunder, drawing out into long Threads, the Stalks grow to be two or three Foot high, round and hairy, having two smaller and more finely cut Leaves set at a Joint; and on their Tops round, flattish, blue Flowers, whose middle Part is compos'd of several smaller hollow Flosculi, each set in its particular Calyx, but having an outer Row larger and more showy: Each Flower is made of one Leaf cut into five unequal Parts. When the Flowers are fallen, the Heads grow round by the enlarging of the Calyces into hairy, flattish Seed; the Root runs down deep into the Ground: It grows in Fields and Meadows, and flowers in June. The Leaves are used.

They are accounted cordial, alexipharmic, sudorific, and pectoral; and good for all Distempers of the Lungs; as Coughs, Shortness of Breath, and as also for sore Throats and Quinsies. Outwardly, they are serviceable against the Itch, whence it takes its Name of *Scabiosa*; scabby Sores, Tetters, and other cutaneous Distempers; and takes black and blue Marks out of the Skin.

Official Preparations from *Scabious*, are the *Syrupus Scabiosæ Comp.* and the *Valentia Scabiosæ*. *Miller's Bot. Off.*

*Scabious* is bitter, and gives a faint Tincture of red to the blue Paper, which gives us Reason to believe, that it contains a Salt resembling the *Sal Ammoniac*, and joined with a great Quantity of fetid Oil, and Earth; for,

By the chymical Analysis, beside several acid Liquors, a great deal of Sulphur and Earth, and a little urinous Spirit, and volatile concrete Salt are obtained from it. The *Scabious* is alexipharmic, sudorific, aperitive, deterfive, vulnerary, and good to promote Expectoration when the Bronchia and Vesicles of the Lungs are stuffed with a glutinous and condensed Phlegm, the Juice of this Plant, from three to six Ounces, in which one Dram of Treacle and ten Grains of Camphire are dissolved, may be given for a Sudorific: This is a good Remedy in malignant Fevers, Small-pox, Measles, and in the Pleurisy, after the Use of antimonial Medicines. *Scabious* and *Cardus Benedictus* Water are mixed in expectorating and diaphoretic Ju-  
leps. A Syrup of the Juice of this Plant is very good for cutaneous Diseases; but the outward Parts must be bathed at the same Time with the Decoction of *Scabious*: Take a Pint of this Decoction, three Spoonfuls of well camphorated Brandy, separate what of the Camphire remains upon the Surface of the Decoction, by passing it through a Linnen Cloth, and give it by Spoonfuls for the Vapours; bathe for the Tetters for about the space of a Month, and continue the Use of the Syrup for the whole Time. The same Decoction may be given to those who make purulent Urine, and those that have Ulcers in their inward Parts. It is used also to wash Wounds. *Tabernaemontanus* says, that the Juice of *Scabious* mix'd with a little Borax and Camphire takes away the white Spots that are often seen upon the Horn of the Eye. *Martyn's Tournefort.*

It is an Alexipharmic and Pulmonic, and is of principal Use in Imposthumes, a Pleurisy, Quinsy, Cough, Asthma, the Pestilence, and fistulous Ulcers. Outwardly, it is used in the Scabies, Pruritus, Impetigo, and the like cutaneous Distempers. *Dale from Schröder.*

6. *Scabiosa*; *Alpina*; *vulgari similis*; *folio viridiori, magis laciniato*; *flore purpureo*.

7. *Scabiosa*; *major*; *communior*; *hirsuta*; *folio non laciniato*. *I. B.* 3. 2.

8. *Scabiosa*; *integrifolia*; *glabra*; *radice præmorsa*. *Boerb. Ind. A.* 129. *Morsus Diaboli, & Succisa, Offic. Morsus Diaboli*, *Ger.* 587. *Emac.* 726. *Morsus Diaboli vulgaris flore purpureo*, *Park.* 491. *Succisa glabra*, *C. B. P.* 269. *Succisa five Morsus Diaboli*, *I. B.* 3. 11. *Raii Hist.* 1. 380. *Scabiosa radice succisâ flore globosa*, *Raii Synop.* 3. 191. *Scabiosa folio integro glabro, flore cærulea*. *Tourn. Inst.* 466. DEVIL'S BIT.

The Root of Devil's Bit is thick and short, at the Head shooting out strings, or large Fibres on every Side, but seeming as it were cut off in the Middle, whence it takes its Name *Succisa*. The Leaves are long, and somewhat broad, and pointed at the Ends, rough and hairy, standing on long foot Stalks, little or nothing serrated about the Edges. The Stalks arise to be a Foot high, or more, and round and hairy, having two smaller Leaves set at a Joint, and on their Tops Flowers, like those of *Scabious*, but in rounder Heads, and all of a Bigness, each made of a short Tube, cut into five Segments, set in its proper Calyx, and followed by a round striated Seed. It grows in Meadows and Pasture Grounds, but flowers not till the End of Summer: The Leaves are used.

They are accounted alexipharmic, and useful in malignant Fevers and pestilential Distempers, and against the Bites of venomous Creatures. They are good to dissolve congeal'd Blood, and therefore serviceable against the ill Effects of Fall, and Contusions; and being applied as a Cataplasin, take away the black and blue Marks in the Skin arising from them. Our Herb-Women generally sell the Leaves of this Plant for those of common *Scabious*. *Miller's Bot. Off.*

The Leaves of the *Succisa*, which they call (in *English*) Devil's-bit, are bitter, and stain the blue Paper with a deep red Colour. The Root, which is bitter and stiptic, stains it with a deeper. The same Virtues are attributed to this Plant that are to the *Scabious*. *Martyn's Tournefort.*

9. *Scabiosa*; *folio integro*; *flore albo*. *T.* 466. *Succisa glabra, floribus albis*. *C. B. P.* 269.

10. *Scabiosa*; *folio integro*; *flore incarnato*. *T.* 466. *Succisa, glabra, floribus incarnatis*. *C. B. P.* 269.

11. *Scabiosa*; *Africana*; *frutescens*; *folio rigido, splendente, serrato*; *flore albicante*. *H. A.* 2. 185.

12. *Scabiosa*; *Syriaca*; *annua*; *flore cærulea*; *Sylvan ex Syria dicta*. *H. Maurocen.* 157.

13. *Scabiosa*; *altissima*; *annua*; *foliis Agrimonie non nihil similibus*. *H. L.* 539.

14. *Scabiosa*; *Orientalis*; *argentea*; *foliis inferioribus incisis*. *T. Cor.* 34.

15. *Scabiosa*;



15. Scabiosa; Stellata; folio laciniato; major. C. B. P. 271.

16. Scabiosa; Stellata; folio non dessecto. C. B. P. 271. *Scabiosa Arborea*. Alpin. Exot. 34.

The Plant which I call *Scabiosa Arborefcens* has a whitish, thick Trunk, a Span high, springing from a small Root, which runs into many long, slender Fibres, spreading obliquely under Ground. From the Trunk spring many long, slender Stalks, which rise obliquely upwards, and are adorned at just Intervals with five, six, seven, eight, or perhaps nine hoary, whitish Leaves; in Shape and Size resembling those of the Aizoon, or Sempervive. The Flowers are large, of a Carnation Colour, inclining to white, of the Size and Shape of those of the common Scabious, and grow two or three on a Stalk, hanging by long Pedicles, into which the Stalk is divided. These Flowers consist of Floscules closely collected into a round Head, of the Size of a Cherry, from whence are produced small round Seeds. The whole Plant has a white, hoary, and very beautiful Aspect, and grows to the Height of two Cubits, or more. It is destitute, especially the Flowers, of Smell; but has a bitterish and somewhat astringent Taste, whence it appears to be of a deterfive and aperient Quality, and somewhat hot and dry, and therefore serviceable in conglutinating and incarning Ulcers. *Prosper Alpinus de Plantis exoticis*.

17. Scabiosa; Stellata; pretescens; Leucoli folio minor, una alterave crenâ inciso. Flor. 2. 56.

18. Scabiosa; Indica; prolifera. Hort. Edinb.

19. Scabiosa; peregrina; rubra; capitulo oblongo. C. B. P. 270.

20. Scabiosa; peregrina; capitulo oblongo; flore carneo.

21. Scabiosa; peregrina; capitulo oblongo; flore atropurpureo.

22. Scabiosa; peregrina; capitulo oblongo, variegato.

23. Scabiosa; capitulo globosa; minor. C. B. P. 270.

24. Scabiosa; capitulo globosa; major. C. B. P. 270.

25. Scabiosa; folio molli, incano; flore incarnato.

26. Scabiosa; tenui folia; flore cœruleo; biennis.

27. Scabiosa; Catalanixestensis; minor; folio palmato seu Cardiacæ; incarnato flore.

28. Scabiosa; capitulo globoso, foliis in tenuissimas laciniâs divis. C. B. P. 271.

29. Scabiosa; Alpina; altissima; foliis tenuissimè dissectis; flore cœruleo. II. Mauroc. 156. *Coronâ feminis purpureâ*.

30. Scabiosa; Alpina; altissima, foliis tenuissimè dissectis; flore cœruleo. H. Mauroc. 156. *Coronâ feminis albâ*.

31. Scabiosa; *ωχρολευκὴ* flore; five VII Clus. H. iii.

32. Scabiosa; *ωχρολευκὴ* flore; five VII Clus. H. ii. *flore albo*.

33. Scabiosa; Cretica; capitulo pappos mentiente. T. Cor. 34.

34. Scabiosa; Virgæ Pastoris folio. C. B. P. 270.

35. Scabiosa; Orientalis; hirsuta; tenuissimè laciniata; flore parvo purpureo. T. C. 34.

36. Scabiosa; fruticans; angustifolia. C. B. 270.

37. Scabiosa; foliis argenteis. Wheeler.

38. Scabiosa; Indica. Bontii.

39. Scabiosa; argentea; angustifolia. C. B. P. 270.

40. Scabiosa; fruticans; angustifolia alba. C. B. P. 270.

41. Scabiosa; flore globoso, niveo. C. B. P. 270.

42. Scabiosa; maritima; parva. J. B. 3. 7.

43. Scabiosa; fruticans; latifolia; alba. C. B. P. 296.

44. Scabiosa; altissima; flore cœruleo.

45. Scabiosa; altissima; flore carneo.

46. Scabiosa; frutescens; foliis intra integris; flore cœruleo.

47. Scabiosa; perennis; sicula; flore sulphureo.

48. Scabiosa; annua; parva; ramosa; flore parvo, pallide cœruleo. Boerb. Ind. Alt. Plant. Vol. I.

It takes its Name from the *Scabies*, which it is said to cure.

These Plants are very serviceable in Diseases of the Breast, whenever a gross tenacious Matter requires to be attenuated and lubricated; and it is of most Virtue when taken in a Decoction with Honey in hot Countries. The Seed is exhibited in all violent Fevers, for it is demulcent and attenuating. For Contusions and Wounds, and especially for the Pestilence and French Pox, it is said to be more effectual than Sarsaparilla, or Lignum Guaiacum. The fifth and seventh Species are proper for cutaneous Diseases, and take their Name more particularly from the *Scabies*; and their Infusion, Decoction, or expressed Juice, may very safely be used against the Pleurisy or Peripneumony; for the Juice is somewhat viscous, and the Herb is maturating, and promotes Expectoration in acute Diseases. The same, you will say, has been affirmed of *Savory*; but this is sometimes too stimulating, and provokes to Stool; whereas *Scabious* is a very gentle Plant,

and no way heating. The eighth and tenth Species go by the Name of *Devil's-bit*, because their fibrous Roots are cut off in the Middle, and by their Section represent a Crown. The Antients say, that the Devil, in spite to Mankind, bit off a Piece of the Root in Paradise; as knowing how beneficial it would be to the Human Race. The Root perishes yearly, and is renew'd in Autumn. The distilled Water of the fifth Species is much commended; but I believe it to be of no more Virtue than Rain water. The ninth is especially recommended for the Pestilence. They are all aperient and sudorific, and therefore of Use in the Small-Pox, Quinsy, Cough, Asthma, and Fistula's, or running Ulcers of the Breasts and Legs. Outwardly, they are effectual in the Pruritus, Tinea of the Head, Impetigo, Pains of the Hæmorrhoids, and Pimples in the Face. *Hist. Plant. ascript: Boerhaave*.

SCABRUS, in *Paracelsus*, is a Disorder of the Ear, consisting in a Pain, or Asperity, of that Organ.

SCACURCULA. The Spirit of the Bone of a Stag's Heart. *Rulandus*.

SCADIDA CALLI. A Name for the *Euphorbium verum antiquorum*.

SCALA. A Ladder, us'd sometimes as a surgical Instrument, for reducing a Luxation of the *Humerus*.

SCALENI MUSCULI.

These are compound Muscles, irregularly triangular, and from this Figure the ancient *Greeks* gave them their Name. They reckoned them to be only two in Number, situated laterally on the Vertebrae of the Neck, all the way down to the first and second true Ribs. Afterwards they were divided into six, three lying on each Side; but I have commonly found no more than two on each Side, one lying upon the other; the first of which I name *Scalenus Primus*, or *Primæ Costæ*; the other, *Scalenus Secundus*, or *Secundæ Costæ*.

The *Scalenus Primus* is fixed to the upper Part of the Outside of the first Rib, by two distinct Portions, called commonly Branches, one anterior, the other posterior. The anterior Branch is fixed to the middle Portion of the Rib, about an Inch from the Cartilage. From thence it runs obliquely upwards, and is inserted in the transverse Apophysis of the sixth, fifth, and sometimes third Vertebra of the Neck.

The posterior Branch is fixed more backward in the first Rib, an Interstice of about an Inch; but being left between it and the other Branch, through which the Axillary Artery and Brachial Nerves are transmitted. From thence it runs up obliquely behind the former, and is inserted in all the transverse Apophyses of the Neck.

The *Scalenus Secundus* is fixed a little more backward in the external Labium of the upper Edge of the second Rib, sometimes by two separate Portions, and sometimes without any Division. The anterior Portion is fixed immediately under the posterior Portion of the first *Scalenus*, by a short flat Tendon, united a little with the first intercostal Muscle. From thence it runs up over the posterior Portion of the first *Scalenus*, communicating also with that Muscle, and is fixed by Insertions, partly tendinous and partly fleshy, in the transverse Apophyses of the four first Vertebrae of the Neck.

The posterior Portion is fixed in the second Rib, more backward than the other. From thence it runs up, being divided into two Portions, whereof one is inserted in the transverse Apophyses of the three first Vertebrae of the Neck, behind the *Scalenus Primus*. The other Portion runs up behind the former, and is inserted in the transverse Apophyses of the two first Vertebrae.

The vertebral Insertions of both *Scaleni* vary, they being sometimes confounded with each other, and sometimes with those of the neighbouring Muscles. Behind the *Scalenus Secundus*, there is a small fleshy Plane inserted in the transverse Apophyses of the last Vertebrae of the Neck, and in the second Rib. This does not belong to the *Scaleni*, but is the first of the *Musculi Supra Costales*, or *Levatores Costarum*, as they are commonly called.

In dissecting the anterior Portion of the second *Scalenus*, I have observed a small Muscle fixed to the Extremity of the transverse Apophyses of the last Vertebra of the Neck, which having run down from thence to the inner and lower Part of the first true Rib, was slightly inserted there, and seemed to continue its Course to the convex Side of the Pleura. I have also seen all the *Scaleni* inserted in the first Rib.

The *Scaleni* seem better fitted for the Motions of the Neck, than for those of Respiration; and I frankly acknowledge, says *Winslow*, that in reflecting on this, I began to doubt of this latter Use; especially when I called to Mind what I said about the Uses of the Subclavius, (See *SUBCLAVIUS*) which



which is, that I could not believe this Muscle to be employed in Respiration, because of its Insertion in the cartilaginous Portion of the first Rib, which is immovably fixed to the Sternum; and also much shorter, much broader, and consequently much less flexible than the Cartilages of the other Ribs.

Moreover, the Neck, in many Situations, cannot serve as a fixed Point to the *Scaleni* for the Motion of the Ribs; as for Instance, when it is bent forward over the Sternum, or inclined very much to either Shoulder; and yet we find that none of these Situations do in the least hinder the Motions of Respiration.

From this Time, therefore, I shall rank the *Scaleni* among the Muscles which move the *Vertebrae* of the Neck, because the Articulation of the first Rib on both Sides, with the first Vertebra of the Back, seems to serve only for the Motion of that Vertebra on the Rib, and not of the Rib on the Vertebra. In this manner ought Truth to be embraced, wherever it presents itself. *Winslow's Anatomy.*

SCALPRUM. A Lenticular, or Raspatory. *Blancard* explains *Scalprum*, a Chisel for Amputations; or a Launcet.

SCAMMA. *σχάμμα*, in *Caelius Aurelianus, Morb. Chronic. Lib. 2. Cap. 1.* was the Limit, or Bound of the Space, or Plot of Ground, allotted for the Use of those who exercised themselves in Leaping, and mark'd by laying along a Rail, or drawing a Trench. The same Author uses the Word to signify the Rails, or Posts, which marked out the Area, or Space of Ground, design'd for Walking. *Scamma* was, also, the Pit in the Stage where the Wrestlers played their Prizes.

SCAMMONIA. *σκαμμωνία*. Scammony. A Plant, which from one Root shoots up a Multitude of fat, and somewhat hairy Stalks, to the Height of three Cubits, with hairy Leaves, resembling those of the Helxinè, or Ivy, but softer and triangular. The Flowers are white, round, concave in manner of Baskets, and of a strong Smell. The Root is very long, as thick as a Man's Arm, white, of a strong Smell, and full of Juice, which is collected in the following manner: They separate the Root from the Head, and with a Knife excavate it in Form of a Cupola; into this Cavity from all Parts runs the Juice, which is taken out in Shells. Others dig a Cavity of the same Form in the Ground, and strewing the same with Walnut-Leaves, let the Juice run into it, and there suffer it to dry before they remove it.

The best Scammony is pellucid, light, rare, of the Colour of Bull's Glue, with small fistulous Perforations, and fungous; such is what is imported from *Mysia* in *Asia*. In trying the Goodness of it, it is not sufficient that it turns white when touched with the Tongue, for so it will do when mixed with the Juice of the *Tithymalus*, but Regard is to be had to the forementioned Characters; and, also, that it is not over-heating or burning upon the Tongue, as it is when mixed with the *Tithymalus*. What is made in *Syria* and *Judea* is the worst, being ponderous, dense, and adulterated with the *Tithymalus* and Flower of Vetches.

A Dram, or four Oboli of the Juice taken in Hydromel, or Water, purges downwards Bile and Phlegm. Two Oboli with Sesamum, or some other Seed, are sufficient for loosening the Belly. But where stronger and more efficacious Purgings are required, the Dose may be three Oboli of the Juice; with two Oboli of black Hellebore, and a Dram of Aloes. A purging Salt is, also, prepared by mixing twenty Drams of the Juice of Scammony with six Cyathi of Salts: This is exhibited in Proportion to the Strength, the full Dose being three Cochlearia, the middle two, and the least one. A Dram or two of the Root, mixed with the before-mentioned, serves also for a Purge; and some drink the Decoction of it. The same boiled in Vinegar, and then triturated with Barley-Flower, makes a useful Cataplasm for the Sciatica. The Juice applied in a Pessary with Wool, destroys the Embryo; made in a Litus, with Oil or Honey, dissolves a Phyma; boiled in Vinegar, cures the Leprosy, rubbed on the Parts affected; and mixed with Vinegar and Oil of Roses, is good to wash the Head affected with an inveterate Cephalagia. *Dioscorides, Lib. 4. Cap. 171.*

SCAMMONITES. *σκαμμωνίτης*. Scammonites, or Wine of Scammony, is prepared by taking fifteen Drams of the Root of Scammony, digged in the Time of Harvest, and putting them, bruised and tied up in a Linnen-Cloth, into a Congius of Must. It purges the Belly, and evacuates Bile and Phlegm. *Dioscorides, Lib. 5. Cap. 83.*

#### SCAMMONIUM.

We have two Sorts of Scammony in the Shops, that of *Aleppo*, and that of *Smyrna*. The first is the best and most purgative; and is got from a Plant named *Scammonia Syriaca*, *C. B. P.* which is a Species of *Convolvulus*; it is a very strong Cathartic, but causes great irritation, and even Inflammations in weak Habits. It is given, in Substance, from two to twelve Grains; but ought never to be used when there is the least

Suspicion of Inflammations in any part of the Abdomen. It is likewise a very ticklish, uncertain Purge; sometimes it has no Effect at all; sometimes it causes fatal Super-purgations; and, which is most remarkable, it sometimes does not operate at all the first Day, but brings on an insupportable Tenesmus and Hypercatharsis the next. It is very proper to dilute it with some oily, viscid Substance; such as the Yolk of an Egg, or an Emulsion made with Sweet-almonds, and the cold Seeds. Prepared Scammony, or Diagridium, is a very proper Ingredient in the *Pulvis Cornachini*, which purges without any of the bad Effects of Scammony. *Madam Grimaldi's* Powder seems to be nothing but the *Pulvis Cornachini* disguised. Scammony is the Basis of many purgative Compositions, such as the *Diaphanicum*, the *Diaprunum*, *Confectio Hamech*, and others. *Geoffroy.*

#### PREPARATIONS OF SCAMMONY.

There are various Ways which Authors have contrived to prepare Scammony, and all with a View to make it a milder and safer Cathartic. Most agree in doing this with Acids; to which purpose some bake or roast it, inclosed in the Fruit of a Quince, and then it is called *Diagridium*; others wash it with the Juice of Lemons, Citrons, and with distilled Vinegar; but the following Preparation is most prescribed.

#### SCAMMONIUM CUM SULPHURE PRÆPARATUM.

*Scammony prepared with Sulphur.*

Lay the Powder of Scammony upon thick, strong Paper; then hold it over Coals, upon which Sulphur is to be burned, until it turns white and melts. Afterwards rub it in a Mortar, a little greased, to a fine Powder for Use.

This is prescribed from three Grains, to eight or ten Grains, and has the Virtues of the Scammony itself, being little altered by this Preparation.

#### RESINA SCAMMONII.

*Resin of Scammony.*

Take any Quantity of Scammony, and dissolve it in a sufficient Quantity of Spirit of Wine; decant it, and put to it common Water, which will occasion it to turn milky, and let the Resin fall to the Bottom; or put it into a Retort, and gently draw off the Spirit.

This is somewhat stronger and rougher in Operation than the Resin of Jalap. Its Dose is from two Grains, to six or seven. *Quincy.*

#### TINCTURE OF SCAMMONY.

The milky, unctuous, thick Juices, which spontaneously distil in plenty from wounded Plants, usually appear Resinous, when inspissated by the Heat of the Air, or Sun; such Juices are particularly those of the Hawk-weeds, Sow-thistles, Goats-beard, Succory, Spurge, Euphorbium, Poppy, or the like; and these Juices, when reduced to a dry Form, and ground to Powder, and boiled once or twice with Spirit of Wine, dissolve in great measure, leaving only a little earthy Pæces behind; and this is particularly the Case of Scammony.

#### R E M A R K S.

The Tincture of Scammony, so prepared, purges in a small Dose, or in the Quantity of two Drams, if mixed in three or four times its Weight of the Syrup of Damask Roses. This Process principally shews, the Action of pure Spirit of Wine upon vegetable Compounds, according to this ancient chymical Rule, that Spirit dissolves its like. For Alcohol, when perfectly pure, scarce extracts any thing more from well-dried compounded Vegetables, than the inflammable Parts, Spirit, Balsam, Oil, Colophony, Rosin, and resinous Gum, and what is merely saponaceous; leaving a pure, dry Salt and Earth behind. If, therefore, the Artist knows that all the particular Virtue required presides in these Parts, then the Operation must be perform'd with pure Alcohol alone; but when the Virtue required lies in a mixture of the oily, resinous, saline, and saponaceous Parts together, it is better to use the common rectified Spirit, than Alcohol; because that Spirit acts, by its aqueous Part, upon what is saline and saponaceous; and by its Alcohol, upon what is balsamic, oily and resinous; so that by this Means, the united Virtues may be obtained

[ \* L e ]



obtained in the Tincture. This is evident in the Roots of Hellebore, Hermodactils, Jalap, Mechoacan, and Turbith; because the Tinctures drawn from them with a Spirit only once rectified, purge much better than those extracted by pure Alcohol. For if a resinous Tincture be drawn by Alcohol from Jalap, it purges less; while the Remainder, being boiled in Water, communicates a purging Virtue thereto. But if the Tincture be extracted with common Spirit, it proves highly purgative; and the Remains contain scarce any thing worth the extracting. Hence we learn, that a fixed alkaline Salt is not required in the making of many Tinctures, because it would either destroy, or change their particular Virtues; and that they are not always to be made with Alcohol; but we are first to consider what Spirit should be used. All the Tinctures prepared with pure Alcohol, will burn entirely away, almost like pure Alcohol itself; whence it is manifest, that this Menstruum extracts only the inflammable Part from the Compound, and leaves the rest behind. If, therefore, the Virtue of a Plant entirely resides in the saline, saponaceous Part, to boil it with Water is better than Alcohol. The Opium dissolved in Water is the best, the next is that dissolved in Wine, and the next in Spirit of Wine; but always the worse, the better the Spirit.

#### A PURGING POTION.

If two Drams of the Tincture of Scammony, prepared, as above, with rectified Spirit of Wine, be mixed with thrice its Weight of a proper purging Syrup, as that of Rhubarb, and this Dose be taken upon an empty Stomach, in a Distemper, Constitution, and Age, that requires so strong a Purge, it commonly has the desired Operation in purging the Bile.

#### R E M A R K S.

Many Virtues of Vegetables usually reside in their Rosins, which are generally tough and ready, by their Tenacity, to stick to one Part of the Body, and thus their Virtues are either retarded or hindered; but when dissolved in a spirituous, vegetable Menstruum, they operate quicker, and in a much less Dose. Rosins dissolved in Spirits are so sharp, that they cannot be drank alone; and if diluted with Water to render them potable, they are presently precipitated into a tenacious Mass; whence nothing seems more proper than to mix them with a thick Syrup, where they cannot be precipitated, but are mitigated by the saccharine Part; which, by its extraordinary simplicity, does not, at the same time, change or impair their Virtue. *Boerhaave's Chymistry.*

SCAMNUM HIPPOCRATIS. See BATHRON.

SCAMPIUZA, *σκαμπιούζα*, A Name for the *Tussilago* or Coltsfoot. *Fuchsius in notis ad Nicolaum Myrepsum*, Sect. 1. Cap. 505.

SCANDELLA. The same as GYMNOCRITHON.

SCANDIX, called also ANTHRISCUS.

The Characters are;

The Root is annual and fibrous, and the Seeds resemble a long Needle.

*Boerhaave* mentions three Sorts of *Scandix*, which are;

1. *Scandix*; femine rostrato; vulgaris. *C. B. P.* 132. *Tourn. Inst.* 326. *Boerb. Ind. A.* 70. *Raii Synop.* 3. 207. *Scandix*, Offic. *Scandix vulgaris*, seu *Pecten Veneris*, Park. *Theat.* 207. *Pecten Veneris*, *J. B.* 3. 71. *Raii Hist.* 1. 428. *Pecten Veneris*, seu *Scandix*, *Ger.* 884. *Emac.* 1041. *SHEPHERD'S NEEDLE, OR VENUS'S COMB.*

It grows frequently among the Corn, and flowers in May and June.

*Scandix* is reckoned among wild oleraceous Plants, or Greens, and is friendly to the Belly and Stomach, whether it be eaten raw or boiled. The Decoction drank is good for the Bladder, Kidneys and Liver. *Dioscorides, Lib. 2. Cap.* 168. Some say, that the Root hereof bruised with Mallows draws out all manner of Splinters, or other Things, infixed in the Body. *Buxb.*

2. *Scandix*; Cretica; minor. *C. B. P.* 152. *Prodr.* 79. *Pecten Veneris, foliis tenuissimè diffectis, Anthriscus Casabona.* *J. B.* 3. 273. *Anisomarathrum*, *Col.* 1. 180.

3. *Scandix*; Orientalis; flore maximo. *T. C. Boer. Ind. Alt. Plant. Vol.* 1.

SCANTON. The fetid Smell of Urine. *Rulandus.*

SCAPELLATUM. Uncovered, it is used with respect to the Retraction of the Prepuce in a *Paraphimosis*.

SCAPHA, *σκάφη*. A Bathing Tub, or Cistern. *Scapha*, in Anatomy, is the external Circumference of the Ear, opposite to the Helix. *Castellus*. It is, also, the Name of a Species of Bandage for the Head. *Galen, de Fasciis.*

SCAPHION, *σκάφιον*. A small Bathing Tub. Or that Part of the Head which is covered with Hairs. Or the *Acrotubulum*. *Scaphia* are the Buttocks.

SCAPHIS, *σκάφις*. A small Bathing-Tub; or a Milk-ing Pail, or a hollow oblong Vessel, in which Barley was

bruised. In *Hippocrates* it sometimes imports the oblong, hollow Shell of the Sea-Muscle; or a Measure, the same as *Concha*.

SCAPHOIDES OS. The same as *Os Naviculare*. See CRUS.

SCAPULA. The Scapula is the triangular Bone situated on the Outside of the Ribs, and extended commonly from the second to the seventh true Rib; its superior posterior Angle, when it is in the least straining Position, being about three Inches from the spinal Processes of the Vertebrae, while the long Side between that Angle and the inferior one is stretched obliquely forward as it descends, having nothing between it and the Ribs, except the thin Extremities of some Muscles; but as the Scapula advances forwards to its Articulation with the Arm Bone, its Distance from the Ribs increases.

The Sides and Angles of the Scapula are all unequal; for the posterior Side or Base is the longest, the inferior Costa is the second in Length, and the superior Costa is about as much proportionally shorter than the inferior, as this is than the Base. The inferior Angle is very acute, the superior is near to a right Angle; and what is called the Anterior, does not deserve the Name; for the two Sides do not meet to form an Angle. The Body of this Bone is concave towards the Ribs, and convex behind, where it has the Name of *Dorsum*. Three Processes are generally reckoned to proceed from the Scapula. The first is the large Spine that rises from the posterior convex Surface, and divides it unequally. The second Process stands out from the anterior Extremity of the superior Costa; and from its imaginary Resemblance to a Crow's Beak, is termed *Coracoides*. The third Process is the whole anterior thick bulbous Part of the Bone.

After thus naming the several constituent Parts of the Scapula, the particular Description will be more easily understood.

The Base, which is tipped with Cartilage in a young Subject, is not all strait: For above the Spine, this Side runs obliquely forwards to the superior Angle; in which oblique Space the *Musculus patientie* is inserted. At the Root of the Spine, on the Back-part of the Base, a triangular plain distinct Surface is formed by the lower Fibres of the *Trapezius*. Below this the posterior Edge of the Scapula is scabrous and rough for the Insertion of the *Serratus major anticus* and rhomboid Muscles. The inferior Angle is made smooth on its posterior Surface, by the *latissimus dorsi* passing over it. From this forwards the inferior Costa, by the Action of that same Muscle, is for some Way brought to a more direct Course; and so far the posterior Surface is flattened by the Origin of the *Teres major*. As this inferior Costa runs forwards from this, it is of a considerable Thickness; and on its posterior Surface is slightly hollowed, and made smooth by the *Teres minor*; while it has a Fossa formed into it below by the *Teres major*; and between the two a Ridge with a small Depression appears, where the *longus extensor Cubiti* has its Origin. The superior Costa is very thin, and near its anterior Extremity has a semilunar Cavity formed in it; cross the Extremities of which a strong Ligament is stretched, and sometimes the Bone is continued, to form a Hole for the Passage of Blood-Vessels and Nerves. Immediately behind this Cavity the *Musculus coraco-hyoideus* has its Rise; and from it to the Termination of the Fossa for the *Teres minor*, the Scapula is narrower than any where else, and supports the third Process. This Part has got the Name of *Cervix*.

The whole *Dorsum* is always said to be convex; but by reason of the raised Edges that surround it, it is divided into two Cavities by the Spine, which is stretched from behind forwards, much nearer to the superior Costa than to the inferior. The *Cavitas supraspinata* is really concave where the Muscle of the same Name is lodged; while the Surface of this Bone below the Spine is convex, except a Fossa that runs at the Side of the inferior Costa; and on this Surface the *Musculus infraspinatus* is placed. The internal or anterior Surface of this Bone is hollow, except in the Part above the Spine which is convex. In the Hollow the *subscapularis* Muscle is contained. When this Muscle is removed, several Ridges and intermediate Depressions appear, that at first View would seem to be adapted to the Ribs; but the Scapula is situated too obliquely for allowing the Ribs to make these Impressions in such a Direction; and they point out the Interstices of the Bundles of Fibres of which the *subscapularis* Muscle is composed, as *Winslow* justly observes.

The Spine rises small at the Base of the Scapula, and becomes higher and broader as it advances forwards. On the Sides it is unequally hollowed and crooked by the Actions of the adjacent Muscles. Its Ridge is divided into two rough flat Surfaces: Into the superior the *Trapezius* Muscle is inserted; and from the inferior, Part of the *Deltoid* has its Origin. The Extremity of the Spine becomes very broad and flat, and is well known by the Name of the *Acromion*, or Top



Top of the Shoulder. This in Children is an *Epiphysis*; and in some old Subjects I have seen it only joined by a Cartilage to the Spine. The interior Edge of the *Acromion* is flat, smooth, and covered with a Cartilage, for its Articulation with the external Extremity of the Clavicle; and its inferior Surface is hollowed, to allow a Passage for the *infra* and *supra-spinati* Muscles, and free Motion to the *Os humeri*.

The coracoid Process is not strait, but a little crooked, with its Point inclining forwards; so that a Hollow is left at its inferior Root, for the Passage of the *infra-scapularis* Muscle. The Extremity of this Process is marked with three plain Surfaces: Into the internal, the *Serratus minor anticus* is inserted: From the external, one Head of the *Biceps flexor cubiti* rises; and from the inferior, the *Coracobrachialis* has its Origin. At the superior Root of this Process, immediately before the *Cavitas semilunaris*, a plain or rather somewhat hollowed Surface is made by the Origin of the other Head of the *Biceps flexor cubiti*; and from a rough scabrous Surface on the upper Part of the coracoid *Apophysis*, strong Ligaments go out, to connect it to the Clavicle and *Acromion*.

From the *Cervix scapulae* the third Process is produced. This is superficially hollowed on the anterior Part by a glenoid Cavity, which is somewhat elliptical; but has an obtuse Extremity below, and an acute one above; therefore resembles much the Shape of the longitudinal Section of an Egg. Between the posterior Brims of this *Glene*, and the anterior Root of the Spine, a large Sinuosity is left, for the Transmission of the *supra* and *infra-spinati* Muscles. The Root of the *Supercilia* is surrounded by a rough Circle, for the firmer Adhesion of the circular Ligament of the Articulation, and of the Cartilage which is placed on these Brims, where it is very thick, but becomes very thin as it is continued towards the Middle of the Cavity, which it lines all over. The medullary Vessels enter the *Scapula* near the Base of the Spine.

The Substance of the *Scapula* is, as in all other broad flat Bones, cellular, but of a very unequal Thickness; for the Neck and third Process are very big and strong; the inferior Costa, Spine and coracoid Process, are of a middle Thickness; and the Body is so pressed by the Muscles, as to become diaphanous.

The *Scapula* and Clavicle are joined by plain Surfaces, tipped with Cartilage, to which Sort of Articulation I applied the technical Name *Arthrodia*, by which neither Bone is allowed any considerable Motion, being tightly tied down by the common circular Ligament, and the proper one that proceeds from the coracoid Process; otherwise their Surface of Contact is so narrow, that they would be frequently dislocated: A small Flexion however is necessary, and therefore they are not united, into one Bone. Sometimes a movable ligamentous Cartilage is found in this Joint, sometimes such a Cartilage is only interposed at the anterior Half of it, and in some old Subjects I have found a sesamoid Bone here. The *Scapula* is connected by *Sysarcosis* to the Head, *Os hyoides*, *Vertebrae*, Ribs and Arm-bone; and by Means of the Muscles, that have one Extremity fastened to these Bones, and the other to the *Scapula*, it is moved upwards, downwards, backwards or forwards, and can turn in its own Plain, carrying always the exterior Extremity of the Clavicle and the Arm along with it, which Motions are at great Length explained by *Winflow*. The glenoid Cavity of this Bone receives the *Os humeri* by *Enarthrosis*.

The Use of the *Scapula* is to serve as a *Fulcrum* to the Arm; and, by altering its Position on different Occasions, to allow always the Head of the *Os Humeri* a right-situated Socket to move in, and thereby to assist and enlarge the Motions of the superior Extremity, and to afford the Muscles which rise from it more advantageous Actions, by altering their Directions to the Bone they are to move. This Bone, also, serves to defend the Back-part of the Thorax, and is often employed to sustain Weights, or resist Forces too great for the Arm to bear.

The Base, *Acromion*, coracoid Process and Head of the *Scapula*, are all in a cartilaginous State at the Birth; and the three first are joined as *Epiphyses*; while the Head, with the glenoid Cavity, is not formed into a distinct separate Bone, but is gradually produced by the Ossification of the Body of this Bone being continued forwards. *Monro's Osteology*.

The *Scapula* in many Subjects has a small cartilaginous Border along its whole Basis, which in Children is remarkable enough, but in full-grown Persons it disappears.

The Glenoid Cavity of this Bone is covered with a Cartilage, which is thicker toward the Circumference than the Middle, and a little raised above the Edge of the Bone. This Thickness of the cartilaginous Circumference makes the Cavity greater than it appears in the Skeleton; and sometimes in place thereof there is an additional Border, which is thick at the Circumference of the Cavity, thin towards the Bottom, and very narrow. It is of a pliable slippery Substance, yet some-

thing different from that of a Cartilage, resembling in some measure the Border of the Cotyloid Cavity of the *Os Innominatum*.

The small cartilaginous Surface of the *Acromion*, is thicker in the natural State, and very little convex.

The small triangular Surface, at the Extremity of the Spine of the *Scapula*, near the Basis, is covered with a very thin smooth cartilaginous Lamina; but being transparent, it does not appear very white. There are no other Cartilages commonly found in the *Scapula*; though we sometimes observe in dry Bones several Places which seem to have been cartilaginous; but this is owing to the dried Remains of Ligaments and Tendons.

The Neck of the *Scapula*, at a small Distance from the Edge of the Glenoid Cavity, gives Insertion to the capsular Ligament or mucilaginous Bag, and to the articular Ligaments of the Joint of the *Scapula* and *Os Humeri*.

Besides these articular Ligaments of the *Scapula*, there are three ligamentary Cords fixed to the Tuberosity of the Coracoid Apophysis, two of which, by their other Extremities, are inserted in the oblique Eminence on the lower Side of the Humeral Extremity of the Clavicle, the third under the *Acromium*. There is also a thin flat broad Ligament, which reaches between the Crista of the Spine of the *Scapula* and the Edge of the inferior Costa. *Winflow's Anatomy*.

See FASCIA, for the Bandages recommended for Disorders of the *Scapula*.

SCARABÆUS CORNUTUS. Schrod. 5. 345. *Scarabæus maximus Platyceros*, *Taurus nonnullis*, aliis *Cervus velans*, Raii Insect. 74. *Scarabæus Cervus volans dictus*, Mer. Pin. 201. *Scarabæus major cornutus*, Mouff. Insect. 148. *Jonf. de Insect. 67. Cervus volans*, Aldrov. de Insect. 451. Charlt. Exer. 46. THE STAG-FLY.

This Insect is, as I take it, what is usually called the Cock-Chaffer. It is recommended as an Amulet for an Ague, or Pains and Contractions of the Tendons, if applied to the Part affected. *Schroder* reports, that if tied about the Necks of Children, it enables them to retain their Urine. An Oil prepared by Infusion of these Insects, is recommended by the same Author in Pains of the Ears, if dropped into them.

SCARABÆUS PILULARIS. Schrod. 5. 345. *Jonf. de Insect. 70. Raii Insect. 105. Charlt. Exer. 47. Aldrov. de Insect. 449. Mouff. Insect. 153. Scarabæus Pilularis Melanocyaneus*, Mer. Pin. 201. THE COMMON BEETLE.

The Powder of this Insect sprinkled upon a protuberating Eye, or prolapsed Anus, is said to afford singular Relief. In order to reduce them to Powder, they are first to be exposed to the Sun in a Glass-Vessel stoppt, that they may be dried.

An Oil is directed to be prepared of these Insects, boiled in Oil till they are consumed, which applied to the blind Hemorrhoids, by means of a Piece of Cotton, is said to mitigate the Pains thereof. *Schroder*.

*Schroder* takes notice of another Species of *Scarabæus*, which he calls,

SCARABÆUS UNCTUOSUS. This Insect is found in May and June by the Sides of Paths, in Woods; and, when touched, tinges the Hands with a pinguious yellowish Liquor. They are somewhat of the Nature of *Cantharides*, and are recommended by *Wierus*, in the irregular and wandering Gout, if taken in Powder. The Liquor abovementioned, is said to be a good Topic for Wounds. The Insect is an Ingredient in some Plaisters for Bubbles, and Carbuncles; and in some Antidotes; and an Oil is prepared from them, by boiling them in Olive-Oil, which is said to be good against the Bites of Scorpions.

SCARABELAPHUS. A Name for the SCARABÆUS CORNUTUS.

SCARDULA. A Fresh-Water Fish, called, also, *Brama*, and *Cyprinus Latus*, the Bream. It is a Fish resembling a Carp in many Respects. It lives in the same Places, upon the same Food, and also very long; and its Flesh produces nearly the same Effects: Its Shape too is like the Carp; but it is soft, tender, and better tasted than the Carp. Most Authors, who have treated of it, say that this Fish contains gross and excrementitious Juices, and that its Taste is more pleasant than wholesome. However, we have not found it has produced many ill Effects. *Lemery on Foods*.

SCARIFICATION. [Scarification. See CUCURBITULÆ.

*Oribasius*, either from *Apollonius* or himself, speaks very fully of the good Effects of Bleeding by way of Scarification, a thing little taken notice of by former Writers; and assures us, from his own Experience, how successful he had found it in a Suppression of the Menstruæ, Fluxions of the Eyes, Head-ach, and Straitness of Breathing, even when the Person was extremely old.

When he himself was taken ill of the Plague, the second Day he scarified his Thigh, and took away two Pounds of Blood;



Blood; by which Method he entirely recovered, as did several others, who used it. This Manner of Scarifying was different from that of Cupping. The *Arabians* seem to have a Notion of the latter only. But from this Place, as well as from some Passages in *Galen*, it is plain that the Ancients made deep Incisions into the Skin by the Knife. The *Aegyptians* practise it to this Day, and *Prosper Alpinus* describes at large the Apparatus: They first make a strait Ligature under the Ham, then rubb the Leg, and put it into warm Water, and beat it with Reeds to make it swell, and so scarify. In the Cure of Giddiness, *Oribasius* himself speaks of them as two distinct Operations. *Freind's History of Physic*.

SCARIFICATORIUM, or SCARIFICATOR. A Chirurgical Instrument, used for making Scarifications. See CUCURBITULÆ.

SCARIOLA. A Name for the *Cichorium*; *latifolium*; *five Endivia vulgaris*.

SCARLATINA FEBRIS.

1. Tho' the Scarlet-Fever may happen at any time, yet it generally comes at the Close of Summer, when it seizes whole Families, but especially Children. (1.) A Chills and Shivering come at the Beginning, as in other Fevers, but without great Sickness. (2.) Afterwards the whole Skin is covered with small red Spots, which are more numerous, larger and redder, but not so uniform as those which constitute the Measles. (3.) They continue two or three Days, and after they are vanished, and the Skin is scaled off, there remains a kind of branny Scales, dispersed over the Body, which fall off, and come again for twice or thrice successively.

2. As this Disease seems to me to be nothing more than a moderate Effervescence of the Blood, occasioned by the Heat of the preceding Summer, or some other way, I do nothing that may prevent the Depuration of the Blood, and the Expulsion of the peccant Matter through the Pores, which is quickly enough performed. Accordingly I refrain from Bleeding, and the Use of Clysters, which make a Revulsion, whereby I conceive the noxious Particles are more intimately mixed with the Blood, and the Motion which is more agreeable to Nature is checked. On the other hand, I forbear Cardiacs, by the Heat of which the Blood may perhaps be put into a violent Motion, than so gentle and mild a Separation as effects the Cure requires; and besides, by this means a high Fever may be occasioned. I judge it sufficient for the Patient to refrain wholly from Flesh, and all Kinds of spirituous Liquors, and to keep his Room, without lying always in Bed. When the Skin is entirely peeled off, and the Symptoms vanished, it is proper to give a gentle Purge, suited to the Age and Strength of the Patient. By this plain and manifestly natural Method, this Disease in Name only (for 'tis little more) is easily cured, without Trouble or Danger: Whereas, on the contrary, if we add to the Patient's Evils, either by confining him continually in his Bed, or exhibiting Abundance of Cardiacs and other superfluous Remedies, the Disease is immediately augmented, and he frequently falls a Victim to the the Over-officiousness of the Physician.

3. But it should here be observed, that when epileptic Convulsions, or a Coma, arise in this Disease at the Beginning of the Eruption, which sometimes happen to Children and young Persons; 'tis highly proper to apply a large and strong Epispastic to the Neck, and immediately exhibit a Paregoric of Symp of White Poppies, which is to be repeated every Evening during the Illness; and he must be directed to make use of Milk boiled with thrice its Quantity of Water, for his ordinary Drink, and to refrain from Flesh. *Sydenham*.

SCARLEA. The same as SCLAREA. Clary.

SCAROLACHANUM. A Plant mentioned by *Nicolaus Myrepsus*, Sect. 8. C. 71. which *Fuchsius* takes to be the SCARIOLA.

SCARUS. This is a large Fish, which is said to be of the ruminating Kind, and lives upon Herbs and Sea-wreck, without eating any other Fishes. It is found among the Rocks in *Sicily*, *Asia*, and *Greece*. It is esteemed good Food, because its Flesh is tender, friable, and of easy Digestion. Its Liver, when eaten, or when dried, reduced to a Powder, and taken in White Wine, is said to be good against the Jaundice, and proper for removing Obstructions. *Lemery des Drogues*.

SCATEA, in *Paracelsus*, is the second Species of tartareous Urine.

SCAURUS. The same as SARAPUS.

SCILEN. A Name for the SALVATELLA.

SCELERATA HERBA. A Name for the *Ranunculus*; *palybriis*; *Apri folio*; *larvis*.

SCELETON.

All the Bone of an Animal, freed from the Teguments, Muscles, Vessels, Glands and Viscera, and orderly connected, have the general Designation *Skeleton*. This Term might indeed be applied to any dry Preparation, but is now, by the

common Consent of Anatomists, restrained to this Preparation of the Bones.

Of the two Skeletons there are two Sorts; one natural, when the Bones are kept together by their own Ligaments; the other artificial, when they are joined with Wire, or any other Substance which is not Part of the Creature to which the Bones belonged. Small Subjects, and such whose Bones are not fully ossified, are commonly prepared the first Way; because were all their Parts divided, the nicest Artist could not rejoin them, by reason of their Smallness, and of the Separation of the unossified Parts; whereas the Bones of large adult Animals are soonest and most conveniently cleaned when single; and there is no great Difficulty in restoring them to, and keeping them firm in their former natural Situation.

Sometimes we prepare the Skeletons of the same Animal in both these Ways; that is, we leave the smaller Bones joined by their natural Ligaments, and separate the larger ones till they are cleaned, when they are again connected by Wires, or some such Substances.

'Tis worth while to remark, that when the Bones are brought to their natural Situation, scarce any one of them is so placed as to be in a perpendicular Bearing to another; tho' the Fabric composed of them is so contrived, that in an erect Posture, a perpendicular Line, from their common Center of Gravity, falls in the middle of their common Base. By this Contrivance we can support ourselves as firmly, as if the Axis of all the Bones had been a strait Line perpendicular to the Horizon; and we have, at the same time, a much greater Facility and Strength in several of the most necessary Motions we perform. It is true indeed, that wherever the Bones, on which any Part of our Body is sustained, decline from a strait Line, the Force required in the Muscles to counter-act the Gravity of that Part, is greater than otherwise it needed to have been; but then this is effectually provided for in such Places, by the Number and Strength of the Muscles. As long therefore, as we remain in the same Posture, a considerable Number of Muscles must be in a constant State of Contraction; which we know, both from Reason and Experience, must soon create an uneasy Sensation. This we call being weary of one Posture: An Inconvenience that we would not have had in standing erect, if the Bearing of all the Bones to each other had been perpendicular; but 'tis sufficiently compensated by the Quickness, Ease and Strength of a great Variety of other Motions, as was above hinted.

The Bones of Women are smaller, in Proportion to their Length, than those of Men, because the Force of their Muscles is not so great, nor is such strong external Force applied to them, to prevent their stretching out in Length.

The Depressions, Ridges, scabrous Surfaces, and other Inequalities made by the Muscles, are not so conspicuous in them, because their Muscles are neither so thick or strong, or so much employed, to make so strong Prints on their Bones.

Their Os Frontis is more frequently divided by a Continuation of the sagittal Suture, which depends on the first and second general Causes assigned above for the Specialities in their Bones, as will appear after reflecting on the Account given formerly of the middle, internal Spine of this Bone.

Their Clavicles are less crooked, because their Arms have been less forcibly pull'd forwards; which in our European Women, especially those of Distinction, is more hindered by their Garb.

Their Sternum is more raised by long Cartilages below, that the Thorax might be there widened, in some Proportion, to what it is shortened by the Pressure upon the Diaphragm when they are with Child.

The Defect of Bone, or the Hole in the Middle of the Sternum, is ofttest found in them, to allow the Passage of the mammary Vessels, say some; but, in my Opinion, this is owing to a lax Constitution, by which the Ossification is not so soon compleated, as where the Action of the Solids is vigorous, and the Circulation of the Fluids is brisk; for a much smaller Hole might have served this Purpose; and the Branches of the internal mammary Vessels, which are sent to the exterior Parts of the Thorax, pass out between the Cartilages of the Ribs before these are joined to the Sternum.

The Cartilago Xiphoides is oftner bifurcated in Women than Men; for the Reason assigned in the preceding Paragraph, a less forcible Power of Ossification.

The superior Cartilages of the Ribs sooner ossify, to support the Weight of the Mamma.

The middle Cartilages are more flat and broad, by the Weight of the Breasts.

The inferior Cartilages are longer for enlarging the Chest.

The Os Sacrum is more turned outwards for enlarging the Pelvis.

Weakly Women, who have born many Children when young, often have the Vertebrae of their Back bended forwards,



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wards, and their Sternum depressed; or become, as *Chefelden* justly observes, round-shouldered and flat-breasted, by the Pressure and Weight of the impregnated Uterus, and by the strong Action of the abdominal Muscles.

The Os Coccygis is more moveable and less bended forwards, to facilitate the Birth.

The Ossa Ilium are more hollow and more reflected outwards, and consequently farther removed from each other, in order to widen the inferior Part of their Abdomen, and to support better the impregnated Uterus.

The Ridge on the upper Part of the Os Pubis is larger in such Women as have born Children, being extended by the strong Action of the Musculi recti Abdominis.

The Cartilage between the two Ossa Pubis is thicker, by which the Pelvis is more capacious.

The conjoined Surfaces of the Ossa Pubis, and of the Ossa Innominata and Sacrum are less, that with the straiter Os Sacrum, a larger Passage might be left for the Excursion of the Child in Birth.

The great Tuberosity of the Ossa Ischium is flatter in Women than Men; because it is more pressed upon in the sedentary Life which Females enjoy.

In Consequence of the Pelvis of Women being wider, the Articulation of their Thigh Bones must be farther removed from each other; and therefore, as *Albinus* very well remarks, a larger Space is left for the Procreation and Birth of Children; which Distance of the Thighs, may be one Reason why Women, in running, generally shuffle more from one Side to the other than Men, to preserve the Center of Gravity of their Bodies from falling too far to a Side of the Joint of the Thigh that supports them when the other is raised, which would endanger their tumbling to the Ground. *Mour's Osteology.*

SCELETYRBE. See SCELOTYRBE.

SCELOS. σχιλος. The Leg. See CRUS.

SCELOTYRBE. From σχιλος, the Leg, and τύβη, Tumult. A violent Pain in the Legs, proceeding from the Scurvey.

SCEMPSIS. σχιμψις. The same as APOSCPSIS, which see.

SCENOS. σχήνος, in *Hippocrates*, signifies the whole Body.

SCEPARNOS. σκεπάριος. See ASCIA.

SCEPASTRA. σκεπάστρα. A Species of Bandage for the Head. *Galen, de Fasciis.*

SCEPE. σκέπη. A Covering. In *Hippocrates, Epidem. L. 6.* it seems to import the surrounding Air.

SCHAGRI-COTTAM. A Species of Cornel-Tree, which grows in *Malabar*. The expressed Juice of the Fruit mixed with Sugar, and drank, is esteemed very cooling; a Decoction thereof is recommended as a good Lotion for the Uvula when relaxed. The Juice of the Leaves taken with Sugar is good in an hepatic Flux, and Diarrhæa; and, as a Lotion, for Pustules in the Mouth. Of the same Juice, mixed with Vinegar, a Gargarism is made, which is said to relieve in a Quinsy.

SCHASIS. σχασις. Scarification.

SCHEHENDINIGI. Hemp, or Hempseed. *Rulandus.*

SCHEMA. σχήμα. The Figure of a Part of the Body; or the Form and Type of a Disease.

SCHEM-PARITI. The Name of an *Indian* Species of *Alcea*, to which I find no medicinal Virtues ascribed.

SCHERBET, or SERBET. A *Turkish* Liquor, prepared of the acid Juices of Fruits and Sugar.

SCHERUNAM COTTAM. H. M. The Name of a bacciferous Shrub, which grows in the *East Indies*. The Vapour of a Decoction of the Leaves cures the Tooth-Ach, and kills Worms bred in the Teeth. *Rail Hist. Plant.*

SCHERUS CHUNDA. A Name for the *Solanum*; frutescens; Indicum; Fructu rubro.

SCHESIS. σχησις. From σχίζω, to have, hold, retain, signifies such a Disposition of the Body as is easily induced or removed, and is called διαβασις (*Diathesis*), as ἕξις (*Hexis*) is, on the contrary, a settled Disposition, or Habit. Σχησις is, also, the same as ἰσχυσις, a Retention or Suppression; thus σχησις τοῦ ὕδατος, 6 *Epid. Sect. 1. Aph. 2.* are Suppressions of Urine.

SCHETÆA. σχηταία. This Word occurs in *Hippocrates, de Morbis Mulierum, L. 2.* The Phrase is σχηταία δυνάμις, which the Interpreters explain, *They do Things which ought to be restrained from*, that is, throw up indecently their Aliment by Vomit.

SCHETICOS. σχητικός. An Epithet for Diseases, importing their being not so fixed and rooted in the Constitution, but that they may be readily cured. *Galen.*

SCHETPI. H. M. The Name of a bacciferous Shrub, which grows in *Malabar*. The Root bruised and taken in cold Water, is said to be cooling in feverish Burnings, and Heats of the Hands, and to be good for spitting of Blood.

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It is, also, recommended for easing Pains of the Head, if that Part is washed therewith. Taken in Milk, it is said to cool the Kidneys, and to be good in a Gonorrhæa.

There is another Plant much like this which is called *Bem Schetti*, the Fruit of which is eatable, and of a sweetish farinaceous Taste.

SCHIAS. The same as ISCHIAS.

SCHIDACEDON. A Bone is said to be broken σχιδάειν, *Shidacedon*, when it is fractured lengthways. It is derived from σχίζω, to cleave.

SCHINDALMOS. σχινδαλμός. A Fissure.

SCHINELÆON. σχινελαιον. Oil of Mastich. *Dioscorides, L. 1. C. 50.*

SCHISMA. σχίσμα. A Fissure.

SCHISTUS LAPIS. Offic. Charlt. Foss. 24. Matth. 1382. *Schistus* Calc. Mus. 274. Worm. 64. Aldrov. Mus. Metall. 655. De Lact. 123. *Schistus*, seu *Scissilis Lapis*, Boet. 392. THE CLEAVING STONE.

It is exported from *Germany*. The best is of a metallic Substance, and of the Colour of Saffron; the others, which are not so good, are blackish, and consist of thin, thinning, and transparent Laminæ, which stick to one another. The Virtues are the same with those of the *Hæmatites*, only weaker in every Respect. *Bortius* thinks it a Species of Tale; and *Agricola* perceives no Difference between it and the *Hæmatites* except in the Figure.

*Dioscorides* says that it fills up a *Cœloma* of the Eyes, [See COELOMA.] being diluted with Woman's Milk; and is, also, very effectual for a Rupture, or falling out of the same Part, for Thickness of the Eyelids, and a Staphyloma. *Dioscorides, Lib. 5. Cap. 145.*

SCHŒNANTHUS. *Juncus odoratus*, Offic. *Schœnanthum*, Ger. 39. Emac. 43. *Schœnanthus*, five *Juncus odoratus*, J. B. 2. 515. *Rail Hist. 2. 1310.* *Juncus odoratus* five *aromaticus*, C. B. P. 11. *Juncus rotundus aromaticus*, C. B. Theat. 163. *Juncus odoratus tenuior*, Park. Theat. 144. *Gramen dactylon aromaticum, multiplici panicula, spicis brevibus, tomento candicantibus ex eodem pediculo binis.* Pluk. Phytog. Tab. 190. Fig. 1. *Gramen ad Juncum accedens aromaticum majus Syriacum*, Hist. Oxon. 3. 229. CAMELS HAY.

Though this is commonly called a Rush, yet it is not one, but a Species of Grass, whose Leaves grow thick together, inclosing or incompassing one another, having a small fibrous Root. They are long and narrow, of a pleasant sweet Smell. The Stalks grow to be a Foot or more high, bearing Panicles of short woolly Spikes, set opposite to one another. It grows in *Arabia*, and other Eastern Countries. The Leaves only are used.

Camels Hay is heating and drying, opening Obstructions of the Liver and Spleen, and provoking the Catamenia. It easeth the Pain of the Womb after Child-Bearing, provokes Urine, cleanses the Reins, and helps the Hiccough, occasioned by Wind in the Stomach. It is an Ingredient in the two great Compositions, *Theriaca Andromachi*, and *Mithridate*. *Miller's Bot. Off.*

The Leaves and Stalks are used, and are of an acrid, bitterish, and pleasant Taste, and a very fragrant Smell. It is heating, somewhat astringent, discutient, and of fine Parts. It is principally of Use in Obstructions of the Menfes, Liver and Spleen; in Inflations of the Stomach, Vomiting, and Hiccough; Difficulty of Urine, and Pains of the Kidneys, Bladder and Reins. *Dale from Schroder.*

SCHŒNOBATA. σχοινοβασία, from σχοινός, a Rope, and βαίνω, to go. Walking or Dancing on a Rope. It occurs in *Hippocrates, de Vitis Ratione, L. 3.* Some think it should be read κοινοβασία, Walking in the Dust; others read it κοινοβασία, Running a Sort of Race.

SCHŒNOPRASSUM. See CERA.

SCHORIGERIAM. A Species of Nettle which grows in *Malabar*, is called *Batti Schorigeriam*.

SCHULLI. There are two prickly Shrubs which grow in *Malabar*, which are thus called; one is the *Paina Schulli*, to which I find no medicinal Virtues ascribed. The other is the *Nir Schulli*, the Leaves of which powdered, and mixed with the Oil of the *Ficus Infimalis*, [See GLAUCIUM.] is said to dissipate Tumors on any Part of the Body, but especially of the Male *Pudenda*.

SCHUNDA-PANA. The Name of a Palm-Tree, which grows in *Malabar*. See PALMA.

SCIÆNA. The Grunter, or Shadow-Fish. See UMBRA.

SCIAMACHIA, or SCHIOMACHIA. From σχοι, a Shadow, and μάχεται, to fight. A Sort of Exercise among the Ancients, which consisted in Agitations of the Arms, as if a Person was fighting with his Shadow.

SCIATICA.

The Sciatica or Hip-Gout is a continual, heavy, dull, gnawing Pain, in or about the Hip-Joint and the Parts adjacent.

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cent. This Disorder may arise from the same Cause with that which produces the Gout; but is most generally the Effect of catching Cold, or being exposed to the open Air. It may also be occasioned by Contusions and venereal Disorders.

As for the Diagnostics of a Sciatica, it frequently seizes those who have had the Thigh-bone dislocated, especially in a Change of Weather from hot to cold, and sometimes continues during the whole Winter. Men and Women, young and old Persons, are equally subject to this Disorder, in which an external Tumor or Inflammation seldom appears; neither is the Pain so acute as in other Kinds of the Gout; and tho' it has Remissions, yet 'tis generally continual, and increased by walking, or sitting long in the same Posture. When the Sciatica is inveterate, and of long Standing, especially in Persons of tender, lax, or corpulent Habits, there sometimes happens a Relaxation of the Ligaments, which produces a Lameness and a Pain in Motion, and when increased, a partial Dislocation. Sometimes also the Sciatica is produced in old Persons, by any Cause which relaxes, contracts, or obstructs the Nerves of the Thighs, Legs and Feet; and if this Relaxation, Contraction, or Obstruction are violent or long-continued, they bring on a Palsy, and afterwards an Atrophy of the Parts.

The Sciatica is rarely mortal, and seldom dangerous, but often long protracted; and if it proceeds from Blows, Falls, venereal Disorders, or Old-Age, the Patient often relapses in cold Weather, and continues ill for the most part of the Winter. A Palsy and Atrophy of the Parts are very bad Symptoms.

In Sciaticas proceeding from an internal Cause, a proper Regimen must be observed; and in those arising from Old-Age, a nourishing and balsamic Diet should be prescribed. But in other Cases a moderate Diet is to be used. The Patient should, also, be kept in a warm Air, and use proper Exercise.

In the Cure of a Sciatica, Bleeding is beneficial, except in Persons extremely weak or old; on the Day after Venesection an Emetic of Ipecacuana is to be given, and afterwards a purgative Draught, if necessary; which may be prepared in the following Manner.

Take of the *Pilula Matthæi*, half a Scruple; of compound Raddish-Water, two Drams; of epidemic Water, half an Ounce; of alexiterial Milk-water, and black Cherry-water, each one Ounce; and of the *Syrupus de Meconio*, half a Dram: Make into a Draught to be taken at Bed-time.

This Draught may be repeated, if the Pain should be very violent, and the Patient restless; otherwise it is better to omit it.

In a Sciatica, Emetics of Turpeth-Mineral are highly commended, and may be commodiously exhibited in the following Manner.

Take of Turpeth-Mineral six Grains; of the Powder of Ipecacuana, fifteen Grains; and of the Conserve of Rosemary, a Quantity sufficient for making a Bolus.

After the Operation exhibit the following Medicine.

Take of the volatile Salt of Amber and Castor, each six Grains; of London Laudanum, one Grain; of the Conserve of Wood-Sorrel, half an Ounce; of the Oil of Rosemary, one Drop; and of the Syrup of Clove Gilly-Flowers, a Quantity sufficient for making a Bolus, to be taken with the following Draught.

Take of alexiterial Milk-water, two Ounces; of Treacle-water, one Ounce; of the Syrup of Saffron, half an Ounce; and of the compound Spirit of Lavander, half an Ounce: Mix for a Draught.

After the Exhibition of an Emetic, Purgatives are generally used, and operate best, if Calomel is added to them thus.

Take of the Powder of Jalap, two Scruples; of Calomel, half a Scruple; of the Oil of Sassafras, half a Drop; and of the Syrup of Rhubarb, a Quantity sufficient for making a Bolus, to be taken in the Morning with a proper Regimen, and repeated twice a Week for six Times.

But for such as are old or weak, lenient Purgatives are most proper, exhibiting at proper Intervals a Dose of Calomel, to be purged off and repeated alternately for some time. If the Cathartics operate briskly, and the Pain increases upon using them, a Purgative is to be used. As the *Pilula Matthæi* are an Opiate both of a diaphoretic and diuretic Nature, so

they seem well-fitted for this purpose.

On the intermediate Days of Purging, but especially after the Course of it is finished; Preparations of the Woods are of Use, thus:

Take of the Bark of Guajacum and Sassafras-Wood, each four Ounces; and of ston'd Raisins, four Ounces; boil in Spring-Water in a close Vessel for ten Hours; so that there may be eight Pints of the Liquor; which, when strained, is to be used as ordinary Drink.

This Course ought to be continued at least for five or six Weeks, and the following Bolus exhibited during that time, when the Patient goes to Bed.

Take of the Cinnabar of Antimony, one Scruple; of Gum Guajacum and Camphire, each five Grains; of the volatile Salt of Amber, four Grains; of the Oil of Sassafras, one Drop; of the Conserve of Wood-Sorrel, half an Ounce; and of the Balsamic Syrup, a Quantity sufficient for making a Bolus.

For Patients of thin, hectic and weak Constitutions, Balsamics may be mixed with the Medicines already prescribed, such as Sperma-Ceti, Peruvian Balsam, and Balsam of Tolu. Warm Baths of Milk are beneficial, as cold Baths are serviceable for those whose Solids are too much relaxed.

Neither are External to be neglected when the Part is relaxed. Thus:

Take of Oxycroceum and *Paracelsus's* Plaister for Ruptures, each an Ounce; of Camphire, two Drams; of the Oil of Amber, one Dram and an half: Make into a Plaister, to be spread upon Leather, and applied to the Part affected.

But when the Part is contracted, the following Topic is to be used.

Take of Diachylon, with the Gums, two Parts; and of the Ammoniac and Cumin Plaister, each one Part: Mix and apply by way of Plaister to the Part.

When the Blood is poor, and its Circulation languid, a Course of Chalybeate Waters may be beneficial; but in the opposite Extreme, a Milk Regimen, with the testaceous Powders, are to be used.

Sometimes the Gout seizes the Os Ischium, or the Os Coccydialis, where it produces the same Symptoms with those observed in the Sciatica, Allowance being made for the Difference of the Parts. Such a Disorder is generally very painful and hard to be cured. And if, as it sometimes happens, the Part should come to a Suppuration, it is very dangerous; the Ulcer always discharging a sanious Ichor, which shews it to be of a phagedenic Nature. Sometimes, also, a sharp and corrosive Humour occasions a Luxation of the Bone, which is a Case still more dangerous, and requires the Assistance of a Surgeon. But in other Respects the Cure does not materially differ from that of a Sciatica.

Ætherial Oil of Turpentine, taken in the Quantity of eighty or a hundred Drops, in Honey, or any proper Vehicle, at Night, going to Bed, and repeated at due Intervals, is said to be a sovereign Remedy in this Distemper.

SCIDEN. Ceruse. *Rulandus*.

SCILLA.

The Characters are;

The Root is bulbous, very large, capaceous, or Onion-like, and acrimonious. The Leaves are broad; and the Flowers are like those of the *Ornithogalum*, or *Hyacinthus Stellaris*, and grow in a Spike before the Leaves appear.

*Boerhaave* mentions three Sorts of *Scilla*, which are;

1. *Scilla*; vulgaris; radice rubra. *C. B. P.* 73: *Raii Hist.* 2. 1164. *Boerb. Ind. A.* 2. 143. *Scilla*, Offic. *Scilla rubra, magna, vulgaris*, *J. B.* 2. 615. *Scilla rubra, sive Pancratium verum*, *Park. Parad.* 133. *Pancratium Clusii*, *Ger.* 136. *Emac.* 172. *Ornithogalum maritimum, seu Scilla radice rubra*, *Tourn. Inst.* 381. *Cepa maris, & Squilla*, Offic. Germ. SQUILL, or SEA-ONION.

This differs from the White only in the Colour of the Root, which is red, and having its Leaves growing more erect. They are both much of a Nature; but the White is preferred.

They are of a hot bitterish Taste, opening and attenuating; good to cleanse the Lungs of tough viscid Phlegm; and of great Service in Asthmata and Difficulty of Breathing, and are often used as a Vomit, to clear the Stomach, and help the Jaundice and Dropsy. They likewise provoke Urine and the Catamenia.

Official



Official Preparations are the *Acetum*, the *Vinum*, the *Oxymel Scilliticum*, and the *Trochisci de Scilla*. *Miller's Bot. Off.*

It flowers in *September*, and the Root, which is the Part used, is imported to us from *Spain*. It is of an acrid and bitter Taste, attenuant, aperient, discutient, and diuretic; and is principally used in Obstructions of the Liver, Spleen, Biliary Du&, Menfes, and Urine; in mucous Disorders of the Lungs, Coughs, and other like Disorders. *Dale from Schroder.*

OXYMEL SCILLITICUM. See ACETUM.

#### TROCHISCI DE SCILLA AD THERIACAM.

*Troches of Squills for the Theriaca.*

Take Squills gathered about the Beginning of *June*, after the Stalk and Leaves are grown dry, of a middle Size, plump, white, with the exterior Part peeled off, and the harder Part, whereunto the Roots grow, cut away, and cover it with a Paste of Wheat-Flower, to be baked in an Oven, until the Crust is well dried; then make an Hole into it with a wooden Scure, to try whether the Squill is thoroughly tender. When it is so, beat it well in a Mortar, and mix with it the Flowers of white Orobardus, or red Cicers sifted fine, eight Ounces of every one Pound of Squills; then form them into Troches of about two Drams each, with Hands rubbed over with Oil of Roses, and dry them in the Shade.

This Process is the same very nearly as directed in the *Augustan* and first *London Dispensatory*: Its first Contrivance is ascribed to *Galen*, who describes it *de Antidotis*, and in the *Theriaca ad Pisonem*; for it was originally designed; but *Zwelfer* finds great fault with it on many Accounts, with relation to the Virtues of Squills; but let that be as it will, he says in the Troches there is so little as to avail hardly any thing, reckoning that not above nine Ounces at most of the Troches can be made out of this Quantity; whereas it is certain that eight Ounces is owing to the Cicer-Flowers.

#### VINUM SCILLITICUM.

*Wine of Squills.*

Take Squills dried, one Pound; infuse them in eight Pints of White Wine fourteen Days; and then strain out the Squills, and keep the Wine for Use.

This is as gentle an Emetic as the Vinegar of Squills; but it is more agreeable to cold weak Stomachs. After some time using this Medicine, it will not vomit, but irritates just enough to squeeze out some slimy Water from the Glands, and thereby greatly contributes to render them ready in the Discharge of their proper Offices; inasmuch that there is hardly any one Medicine that better guards against those Inundations of Rheums, which drown Old-Age, or are the Consequences of Decays from frequent Debauches, than this does; although, indeed it is not very pleasant. From one to four Spoonfuls may be taken every Morning.

2. Scilla; radice alba. *C. B. P.* 73. *Raii Hist.* 2. 1164. *Boerb. Ind. A.* 2. 143. *Scilla alba*, Park. Parad. 133. *Scilla Hispanica vulgaris*, Ger. Emac. 171. *Scilla magna alba*, J. B. 2. 618. *Ornithogalum maritimum*, seu *Scilla radice alba*, Tourn. Inst. 381. THE WHITE SQUILL.

The white Squill, has a large, round, somewhat Pear-shaped Root, compos'd of a great Number of Coats, inclosing one another with several Fibres at the Bottom, from the Middle of which rise a few large, shining, green Leaves, rather bigger than those of the Lilly, with a remarkable Rib in the Middle; these continue all Winter, and withering away, there arises in the Spring a thick, round Stalk, a Foot and a Half high, having a long, and large Spike of six-leaved white Flowers, succeeded by large Seed-Vessels. It grows by the Sea Side in all the warmer Countries. The Roots are used. *Miller's Bot. Off.*

3. Scilla; Africana; flore parvo, viridi; bulbo amplissimo, lanuginoso. *H. A.* 2. 187. *Boer. Ind. Alt. Plant.*

The Squill, besides its Acrimony, which it holds in common with *Arum*, has an ungrateful and somewhat nauseous Taste; hence, besides the Virtues it has in common with *Arum*, it excites Vomiting, and provokes to Stool, and is no less effectual than *Arum* in pituitous Affections. While crude it is very acrimonious, and burns the Fauces. For this Reason they do it in Ovens, or the Sun, and prepare it as *Arum*. It is never given in Substance, but affords Matter for the celebrated Preparation of the *Oxymel Scilliticum*, so justly commended for dissolving of Phlegm. *Hist. Plant. ascript. Boerhaave.*

SCILLITICUM ACETUM. Vinegar of Squills. See ACETUM.

SCINCUS. *Offic. Schrod.* 5. 346. *Jons. de Quad.* 138. *Aldrov. de Quad. Ovip.* 658. *Bellon. de Aquat.* 47. *Rondelet. de Pisc.* 2. 231. *Scincus seu Crocodilus terrestris* *Raii Synop. A.* 271. *Scincus, quem & Crocodilum terrestrum vocant.* *Gesn. de Quad. Ovip.* 24. *Scincus marinus*, *Mont. Exot.* 6. *Scincus Lacerti Species*, *Ind. Med.* 107. THE SCINK.

It is an aquatic Animal; cover'd with ash-colour'd Scales, and mark'd with a sky-colour'd List; which reaches from the Head to the Tail. It is an Alexipharmic; and Provocative to Venery. *Schroder.* For the first of these Qualities, says the famous *Amman*, it is received as an Ingredient in *Mithridate*; and for the other, into the *Electuarium Diasatyrion*; tho' indeed in different Parts; for in the *Diasatyrion*, the Belly and Loins only are used, perhaps for the Sake of an Hypothesis relating to the Situation of the Reins and spermatie Vessels: But *Mithridate* receives only the Belly of the Animal; whence you may infer, says *Hoffman*, that different Parts work different Effects. But since *Dioscorides* commends the Flesh about the Kidneys, *Galen, lib. 1. Simpl.* the Kidneys themselves, and *Pliny, lib. 28. cap. 28.* the Snout and Feet, as Incentives to Venery; these and other Hypotheses relating to the *Scincus* are by *Hoffman* justly rejected. *Dale.*

SCINTILLA VENERIS, in *Paracelsus*, is a Resolution of the Limbs, or Deprivation of Motion from a venereal Cause.

SCIRONA. Autumnal Dew. *Rulandus.*

SCIRPUS. A Name for the *Juncus*; aquaticus; maximus.

SCIRRHONES. Small subcutaneous Lice.

SCIRRHOSIS. A Disorder of the Eye, arising from the Violence of a long continued Inflammation, when the Flesh increases in Bulk, and assumes a somewhat livid Colour.

SCIRRHUS.

A Scirrhus may be produced by whatever is capable of coagulating, inspissating, or drying the Liquids in the Glands; the Seat therefore of a Scirrhus may be any of the Glands, but especially such as contain an easily inspissated Liqueur, or from their Situation dispose their Contents to a Stagnation. Hence a Scyrrhus frequently happens in the Eyes, the Nostrils, the Mouth, the Breasts, the Axillae, the Groin, the Pancreas, the Mesentery, and the Uterus.

A Scirrhus is one of the general Methods in which an Inflammation terminates; when, for Instance, the Inflammation is neither resolv'd, nor yet that Part separated from the sound adjacent Parts, which had been rendered unfit for carrying on the vital Circulation of the Humours according to the Laws of Health, both in the fluid and solid Parts: But as in the Article *Gangrena* that Species of Gangrene is not only considered which arises after violent Inflammations, but also all Gangrenes proceeding from whatever Cause, so in this Article the general History and Cure of a Scirrhus is describ'd.

*Galen*, when treating of the Difference of Tumors, in *Comment in Aphor.* 34. *Se& 4.* informs us, that hard Tumors without Pain are called *Scirrhus*. This Definition of a Scirrhus he also gives in various other Places, and this seems to have been the general Notion of this Species of Tumor. In some Passages, however, he gives a somewhat different Description of a Scirrhus; for in his *Method Medend. ad Glaucon, lib. 3. cap. 6.* he speaks in the following Manner: "A legitimate Scirrhus is a preternatural Tumour, hard, and without Sensation; but a spurious Scirrhus is not totally depriv'd of Sensation, though it with some Difficulty perceives the Action of Objects upon it; that Species therefore, which is deprived of Sensation, is incurable; whereas that which retains a languid Sensation is not absolutely incurable, though, at the same time, it is not to be removed without great Difficulty". But that *Galen* did not in this Passage use the Word *ἀναισθητός* in the same Sense in which the Word *ἀναισθητός* is generally taken, is obvious from a Passage of his *Method. Medend. lib. 14. cap. 6.* where he speaks thus: "We call a Scirrhus a hard Tumor without Pain, though not absolutely without Sensation; for this latter Species of Tumor is not curable." From all which 'tis obvious, that in all Scirrhuses there is Hardness without Pain, and, according to *Galen*, total Insensibility in those of the worst and incurable Kind.

But *Galen* has described Scirrhuses not only in the glandular, but also in the other Parts of the Body: For when treating of the Cure of a Scirrhus, in the fifth Chap. of the last-quoted Book, he recommends the Virtues of Vinegar as effectual and safe when the fleshy Parts of the Muscles are become scirrhus; but he orders it to be used with greater Caution, if the Ligaments or Tendons are affected with the like Misfortune. And in his *Method. Medend. ad Glaucon, lib. 2. cap. 6.* he informs us, that in a Boy labouring



labouring under an Erysipelas, when his Skin was constricted by Refrigeration, there was a scirrhus Tumor left in his whole Thigh: For it is not to be denied, that preternatural hard Tumors, without Pain, are also found in other Parts of the Body besides the Glands; which, therefore, according to the general Definition of *Galen*, ought to be call'd Scirrhuses. But since these Tumors often terminate in a different Method from a Scirrhus, and do not so readily degenerate into a Cancer, I think it would be expedient for the Sake of Distinction to call them scirrhus Tumors.

The Seat of a Scirrhus, properly so call'd, seems to be a Gland, or hollow Follicule, whose Sides consist of all Kinds of small Vessels, and into whose Cavity the opening Mouths of the small Arteries discharge a peculiar Liquor, by the Fabric of the Arteries secreted from the Blood convey'd to the Gland; then the Liquid collected in the Cavity of the Gland is conveyed through its Emunctory, and for various Purposes distributed to different Parts of the Body. There are many simple Glands of this Kind which discharge the Liquid contained in their Cavities either on the Surfaces of the Membranes, or towards the Skin, or the Cavities of the Nostriis, Mouth, Fauces, Aspera Arteria, and Oesophagus. If many of these simple Follicules are conceiv'd united, and their Emunctories terminating in one large common Canal, which conveys the Liquid thus collected for its peculiar Uses, then the Congeries of these Glands contain'd in one common Membrane, and terminating in one common Emunctory, is, by Anatomists, call'd a Compound, or conglomerate Gland. The parotid and other Glands, for Instance, which secrete the Saliva from the Blood, and convey it through one Emunctory into the Cavity of the Mouth, are call'd conglomerate Glands.

Every thing, therefore, which by Coagulation, Inspissation, or Exsiccation, can render the Juice secreted by the Fabric of the Glands, and collected in their Cavities, incapable of passing through their Emunctories, will lay a Foundation for a Scirrhus. The same Effect will, also, be produced by every Cause which by external Compression so straitens the Emunctories of the Glands, that the Discharge of the Liquid secreted into their Cavities is hindered; then the Follicule, or Gland, will be distended by the retain'd Liquid, and only the thinnest Parts will be reforc'd by the Mouths of the Veins which open unto the Glands, or be discharg'd through the straiten'd Emunctories; whilst the grosser Part being retain'd and accumulated, will distend the Follicule of the Gland, and compress the Vessels running thro' its Membrane; hence will arise a Tumour and Hardness, from an Infarction of the Vessels by Means of the coagulated, inspissated, or dried Fluids. An Absence of Pain will, also, arise from a Compression of the Nerves distributed through the Fabric of the Glands. And in an incurable Scirrhus, as *Galen* calls it, a perfect Insensibility will be produc'd by the same Cause. In other Parts of the Body, also, in which by the arterial Fabric, without the Interposition of such Follicules, the secreted Humours is collected in a certain common Receptacle, the like Misfortunes may happen: Thus, for Instance, in the Testes, the Artery conveying the Blood communicates red Blood to its corresponding Vein, then being divided into numberless Ramifications, which constitutes almost the whole Substance of the Testes, it from its small Mouths discharges into a common Receptacle a peculiar Liquor, by this surprizing Fabric secreted from the Blood. Now, if by any Cause the free Discharge of this Liquid collected in the common Receptacle, is hinder'd, all the same Misfortunes will happen with those already mentioned as incident to the Glands, and the Testis will be distended into a hard Tumor without Pain, that is, will become a Scirrhus. This is evinced by frequent Instances which occur in Practice, and from which 'tis certain, that in this Place, as well as in other Scirrhuses, the Cure is very difficult, and that such Indurations of the Testes are, also, converted into Cancers. The same may also happen in some of the Viscera; for in the Liver the hepatic Bile is secreted from the Blood of the Vena Portæ, and this Bile being receiv'd into the minute Ramifications distributed through the whole Substance of the Liver, is at last pour'd into one common large Duët, call'd the hepatic Duët, through which it is convey'd to the Intestines. Now if the hepatic Duët is obstructed, or the small Ramifications conveying the Bile, secreted by the Fabric of the Liver into it, by any Cause block'd up, such as a Stagnation, Coagulation, Inspissation, or Exsiccation of the Humours, the whole Liver, or some Part of it, may be distended into a scirrhus Tumor. The Production of this Misfortune is greatly favoured by the slow Motion of the Blood of the Vena Portæ, since being now become venous, it ought again to be forced through the narrow Channels of the converging Ca-

nals, and by the easy Degeneration of the Humour into a State of Toughness, which renders it incapable of circulating. Hence, though according to the Opinion of some Anatomists, there were not in the conglomerate Glands, such as those called the Parotid, and others of a similar Nature, such Follicules collecting the Liquid secreted by the Arteries, and conveying it through their small Emunctories into the common excretory Duët; and though the secretory Ramifications derived from the Arteries, without the Interposition of any Follicules, should convey the secreted Liquid directly into the excretory Duët; yet a Scirrhus would be produced by the same Causes. Thus, for instance, if the Juice thus secreted from the arterial Blood, being coagulated, inspissated, or dried, should obstruct the common excretory Duët, or the small secretory Ramifications which convey this Liquid into this common Receptacle, a Scirrhus will be produced: For the great Difficulty of curing a Scirrhus seated in the Glands, properly so called, principally consists in this, that the Matter being collected in these Follicules, and placed, as it were, without the Bounds and Influence of the Circulation, the Impetus of the arterial Blood, propelled by the Force of the Heart and Vessels, cannot act directly on these Parts. But if the parotid Gland consists of minute Arteries, wrapt up in a Clew, and by their small Emunctories conveying the secreted Liquor into the common excretory Duët, the Impetus of the arterial Fluid will reach the small Mouths of these Arteries, infarcted with an inspissated Fluid, with a Force too small to remove that Obstruction, or by a benign Suppuration to separate these minute Vessels, with their obstructing Humour, from the other Vessels to which they adhere. The Person who duly considers these Circumstances, must be convinced, that scirrhus Tumors are not to be cured without the greatest Difficulty; and the Truth of this is sufficiently evinced from the long-continued Indurations of the Testes, in which, however, the Secretion seems to be made without the Interposition of Follicules.

'Tis therefore probable, that the Cure of a Scirrhus is the more difficult, the more compound the Glands it affects, are; for when these simple Follicules, which in the Surface of the Body collect a pinguous kind of Liquid and evacuate it by their Emunctories, are obstructed, the secreted Humour is accumulated, the Follicule distended, and a Tumor produced; which, according to the various Consistence of the Matter it contains, receives different Denominations, such as *Meliceris*, *Atheroma*, and *Steatoma*, which see under their respective Articles; for such Tumors seems justly to be referr'd to this Class, especially if they contain an hard Matter, as happens in Steatoma's, for then they are contained in the general Definition of a Scirrhus. But Surgeons boldly make Incisions in such prominent, inflated Tumors, express their contained Matter, and often happily consume the Cavity of the Follicule by strong Suppuratives, or, sometimes, by Corrosives; for such Tumors rarely degenerate to the Malignity of a Cancer, tho', in external Appearance, they resemble a malignant Scirrhus. Of this I had an Opportunity of seeing a memorable Instance. A Man of sixty Years of Age had, for several Years, been afflicted with an hard Tumor, which was gradually augmented, till it, at last, equal'd the Bulk of an ordinary Fist. It was situated in the inferior left Part of the Face, near the Angle of the inferior Jaw-Bone. Its Basis was broad, but being moveable it could be elevated with the Skin, nor did it adhere to the subjacent Muscles. This Tumor began to be gradually more raised to a Point: The Skin appeared red, or rather almost livid, in the Apex of the Tumor. There first arose an Itching, and then a Pain in the distended Skin; and when his Friends dreaded the worst, because he would apply nothing to it, the Apex or Top broke, spontaneously, and a hard, granulated Matter was discharged. Upon this, the Tumor subsided so far as hardly to leave any Marks of it, and the Patient, for some Years after, enjoyed as good Health as his Age would permit. But in conglomerate Glands, when become scirrhus, this inspissated Liquor is not lodg'd in one Cavity, but is dispersed through several Bags or Vessels. Hence 'tis obvious that the Cure must be far more difficult.

Besides, when a conglomerate Gland becomes scirrhus, the Difference of the Vessels, in which the Obstruction of such a Gland happens, is a Circumstance of great Importance; for in every conglomerate Gland there are Vessels which convey to it the arterial Blood, from which, by the Fabric of the Gland, a peculiar Liquid is secreted. In such Glands there are, also, Vessels which secrete this Liquid from the Blood, Vessels which contain it when secreted, and other Vessels which eliminate and carry it off. If the Vessels which convey the Blood to such a Gland are obstructed, the Impetus of the vital Humours seems capable of acting upon these Parts with such a Force, as, by means of a Suppuration, is sufficient to produce a Separation of the obstructed from the



other Parts; perhaps this happens when, in some Diseases, the paroted Glands so often becoming tumid, fall into a benign Suppuration. But when an Obstruction happens in the secreting Vessels, 'tis sufficiently obvious, that the vital Humours must act upon these Parts with a smaller Impetus; but when this Liquid is concreted and becomes stagnant in the Vessels, containing and collecting the secreted Humour, this Humour, placed without the Limits and Influence of the Circulation, will not yield to the Efficacy of the best Medicines. An Obstruction of the excretory Ducts produces the same Misfortune; unless when their Situation is such, that such Remedies as resolve and attenuate the concreted Humour, may with Success be applied to them; or when there is some Cause lodged about the extreme Orifice of the excretory Duct, which by obstructing or compressing it, hinders the Discharge of the Liquid to be excreted. Thus if the excretory Duct of the paroted Gland is infarcted with any Humour, the whole Fabric of this Gland may be converted into a Scirrhus: But the Situation of this Duct lays a Foundation for hoping, that by Fomentations and Frictions, the beginning Disorder may as yet be surmounted; especially if the obstructing Cause is lodged about the Aperture of this Duct, by which it discharges the secreted Humour into the Mouth, or if any Tumor arising contiguous to this Aperture compresses it. This Doctrine is confirmed by what happens in Diseases of the Genitals; for if by a Gonorrhœa, or any other Cause, a Tumor is produced about that Part of the Urethra where the common Emunctories of the Vesiculæ Seminales, and the Vasa Deferentia open, the Excretion of the Liquid secreted, sometimes in both, but oftener in one of the Testes, is hindered; in which Case, a little after the Vas Deferens and Epididymis, and last of all, the Substance of the Testis, properly so called, begin to swell, I have, in this Case, always observed, that the Epididymis swells first, and often becomes pretty hard, and that the Testis is afterwards distended to a larger Bulk, but remains softer to the Touch than the distended Epididymus. And in this Case the Disorder is generally happily cured, because the Cause is not lodg'd in the Substance of the Testis, but about the End of the excretory Duct: For as soon as the Tumor in the Urethra is diminished, the Epididymus gradually decreases, and by gentle Frictions, is restored to its former Bulk and Softness, whilst the Tumor of the Testis totally disappears. But when the Substance of the Testis is raised into a hard Tumor, without any previous Disorder observable in the Epididymus, the Disease is far more obstinate, since such a Scirrhus is rarely or ever resolved; for in this Case the Disorder is seated in the minute secreting Vessels, or such as contain the secreted Liquid, which are here, with surprising Order, disposed in so many Circumvolutions, that the Impetus of the vital Fluid conveyed through so small a spermatic Artery, must be scarcely any, or at most very small on the obstructed Parts. Scarcely any thing can, in this Case, be expected from external Medicines, since the intricate Substance of the Testis is defended by so many Coverings.

Since, therefore, a Scirrhus arises from a Coagulation, Infissation, or Exsiccation of the glandular Juice, it is obvious, that this Misfortune must happen most frequently in those Parts where, by the Fabric of the Glands, a viscid Humour is secreted, or such a Liquid as though not tough when secreted, yet acquires such a Quality immediately after. The whole internal Part of the Mouth, especially the Fauces, the Oesophagus, the Aspera Arteria, and the Bronchia of the Lungs, have such small mucous Repositories, in which a tough Mucus, for lubricating and defending these Parts, is deposited. 'Tis not, therefore, to be wondered at, if Scirrhuses should be frequently produced in these Parts.

*As for the Eyes;* 'Tis sufficiently certain from Experience, that the sebaceous Glands, situated in the Edges of the Eyelids, and which prepare the unctuous Matter which anoints the Eyelids, and defends them from mutual Attrition, may, when their Emunctories are obstructed, become tumid, and subject to scirrhous Tumors. The Glandula Innominata is, also, situated here, and obnoxious to the same Misfortune. The Caruncle, also, situated in the larger Angle of the Eye, sometimes becomes scirrhous, and is raised to a great Bulk. *Hildanus*, in *Observat. Chirurg. Cent. 1. Observ. 2.* informs us, that he happily removed such a scirrhous Tumor, as large as a Chestnut, formed in the larger Canthus of the left Eye; and in three Weeks Time made so complete a Cure, that the Patient's Sight was not injured. The same Author, in *Obs. 1.* gives us an Account of a more terrible Case, in which a hard livid Scirrhus, as large as a Goose's Egg, and beginning to grow cancerous, hung out without the Eyelids, and afterwards became terrible by an excessive Hemorrhage. But *Hildanus* dexterously extirpated this whole Tumor, together with the Eye from its Orbit, and by that means preserved the Patient.

*As for the Nostrils;* *Ruyfch*, in *Epist. 9. Tab. 9. Fig. 7.* has demonstrated, and shewn by a Figure, that the mucous Membrane lining the Cavities of the Nostrils, abounds with small glandular Bodies. But since the Liquor secreted in these Glands is easily inspissated, hence Scirrhuses are often formed in these Parts. *Hippocrates*, in his *Treatise de Morbis, Lib. 2. Cap. 11.* seems to have described Scirrhuses formed in these Parts, when treating of Polypuses; of which he enumerates five Species; concerning the second of which he speaks thus: "The Nose is filled with Flesh, which appears hard to the Touch." This Flesh he orders to be burned by the actual Cautery. The fourth Species of Polypus he thus describes: "Within the Nose, about the Cartilage, something hard is produced by some particular Cause, and seems to be Flesh; but when it is touched, it appears like a Stone." After dividing the Nose with a Knife, he, also, orders this Species of Tumor to be cauterized in the same manner with the former. And in describing the fifth Species of Polypus, he affirms, "That in the superior Part of the Cartilage of the Nose, small Cancers arise in a kind of oblique manner." These he also orders to be cauterized.

*As for the Mouth;* 'Tis at present sufficiently known, that almost all the internal Parts of the Mouth are furnished with mucous Repositories or Receptacles. The callous Membrane covering the Palate is furnished with them. The Uvula, the pendulous Veil of the Palate, and the Tonsils, which consist of a mucous Membrane, folded up into sinous Wreaths, have an inconceivable Number of such mucous Follicles, which, from their open Mouths, discharge a large Quantity of frothy Mucus. The remotest Part of the Fauces is furnished with a large Number of such mucous Follicles, which resemble small Ulcers so much, that they are often, by the Ignorant, taken for such. 'Tis not, therefore, to be wondered at, that scirrhous Tumors should so often be observed in these Parts. After an ill-cured Inflammation of the Fauces, I have often seen them become scirrhous. *Hildanus*, in *Observ. Chirurg. Cent. 1. Obs. 19.* observed the Uvula scirrhous, hard, livid, unequal, and so large as almost to fill the whole Cavity of the Mouth, and reach to the Fore-Teeth. The same Author, in *Cent. 1. Obs. 20.* about the Root of the Uvula, saw an hard unequal Tumor as large as an Hen's Egg; by which means the Patient's Respiration was hinder'd, and the Deglutition of Aliments, especially of Drink, render'd highly difficult.

*As for the Breasts;* Though *Ruyfch*, in *Epist. Problem 15.* and some other Places, denies that the Breasts are glandular; yet such is their Fabric, and such the Nature of the Milk secreted from the Blood, that scirrhous Tumors are often formed in them, as we are assured from daily Experience: For without the Interposition of any Follicles, the lactiferous Tubes arising from the Arteries, unite with their adjacent Vessels into large Ramifications, and, at last, form the larger Milk-Vessels, which are again contracted, and in small Ducts terminate in the Nipple. But as the Milk collected in the Breasts, and distending the lactiferous Vessels, may again return into the Vessels whence it comes, and as without the Discharge of a single Drop from the Nipple, the most turgid Breast sometimes suddenly becomes empty and subsides, it is obvious, that the lacteal Tubes are a Continuation of the Arteries, without the Intervention of any Follicles. But the Milk naturally disposed to Coagulation, becoming stagnant in the distended lactiferous Vessels, is divided into a Coagulum and Serum. The latter being thin, may easily pass through the Apertures of the Nipple, or return into the Mass of Blood: Whereas, the former deprived of its Serum, remains immoveable in the lactiferous Vessels, where being more dried, it often degenerates into a Scirrhus not to be resolved. And as a Scirrhus formed in the Glands, properly so called, is often obstinate against the best Medicines, because the Impetus and Efficacy of the vital Humours could produce scarcely any Effect upon the coagulated Juice contained in the Cavity of the Gland, so the same will happen in the Breasts; for the larger lactiferous Tubes correspond to the Cavities of the Glands collecting the secreted Liquor. Their narrow Extremities opening into the Nipple, are of a similar Use with the Emunctories of the Glands, which carry off the Humour collected in their Cavities. Hence the Reason is obvious, why Scirrhuses are often formed in the Breasts, tho' they are not, properly speaking, glandular.

*As for the Arm-pits and Groin;* The Glands situated in these Parts are very fit for receiving what is secreted from the whole Mass of Humours. For which Reason, both in Diseases and sometimes in Health, by a salutary Effort of Nature, some Humours are deposited here, which would have been more hurtful elsewhere. Hence sudden Tumors are often produced in these Glands, and frequently prove very obstinate, whether on account of the virulent Nature of the Matter impacted, or on account of the intricate vascular Compages of these Glands;



by which it happens that the Impetus of the arterial Blood can act with little Efficacy on the obstructed Parts. When an inveterate Scirrhus seizes the Breasts, the subaxillary Glands generally become tumid and indurated. And every one knows, that by means of a venereal Contagion, the Glands of the Groin are often changed into Scirrhuses, not to be cured without the greatest Difficulty.

Nor only in the external Parts of the Body are Scirrhuses found, but also in the internal Parts, where they prove the Causes of the most obstinate chronical Disorders.

As for the *Pancreas* and *Mesentery*; 'Tis certain, from many practical Observations, that these Parts have been found scirrhus. Thus, in *Miscel. Curios. Dec. 2. An. 6.* A Country Woman of fifty-one Years of Age, the Mother of a numerous Family, and one who had generally preserved her Health pretty well, yet became sick for about five Years, being afflicted with a Suppression of the Menfes, and a frequent Vomiting, whilst in the mean time a Tumor of the Abdomen was formed, which gradually increasing, filled the whole Right Hypochondrium, might be felt with the Hands, and moved towards the Left-Part of the Body. But after a great deal of Torment she died; and upon laying open her Body, besides other Disorders, all the Glands of her Mesentery were found scirrhus; and the Tumor, which might be felt externally with the Hand, was found to be the Pancreas become tumid and scirrhus. The Mouth of the Pylorus was, also, found scirrhus, and the interior Part of the Stomach was every where full of indurated whitish Glands. *Paré*, in *Lib. 7. Cap. 21.* informs us, that in a Woman of sixty Years of Age, he saw the whole Pancreas and Mesentery scirrhus, and preternaturally large. And in the same Part he affirms, that in scrophulous Patients, after their Death, he had found the Glands of the Mesentery tumid, of various Bulks, whilst some of them were as large as an ordinary Fist. In some, also, there was a whitish, and in others a purulent Matter. *Lamotte*, in his *Traité Complet de Chirurgie*, informs us, that in the Carcass of a dropical Woman there were many scirrhus Glands found, ten or twelve of which were as large as an ordinary Fist, and as hard as Wood.

As for the *Uterus*; *Hippocrates*, in his *Treatise de Mulierum Morbis*, *Lib. 2. Cap. 38.* informs us, that the Uterus is subject to scirrhus Tumors. And in this Place alone, so far as I remember, he uses the Word σκίρρῶδες. "For, says he, if the Uteri are affected with a Scirrhus (ἢ ἀμύτρεαι σκίρρῶδες) the Menfes are obstructed, and the Mouth of the Uterus collapses, and renders them incapable of Conception, and is, as it were, quite different from what it was in a natural State: And if touched, it appears like a Stone." In *Paulus Aegineta*, *Lib. 3. Cap. 68.* a Scirrhus of the Uterus is described. And *Hippocrates*, in his *Treatise de Natura Mul.* *Cap. 28.* informs us, that a Cancer is to be dreaded from a Scirrhus of the Uterus. "For, says he, when the Uterus of a Woman becomes hard, it falls down to the Pudenda. If the Groins become hard, and there is a preternatural Heat in the Pudenda, a Cancer is beginning to be formed." 'Tis also certain, from the Observations of the Moderns, that a Scirrhus is frequently found in the Uterus. *Paré*, in *Lib. 24. C. 41.* in the Carcass of a Woman, who had long been afflicted with an hard and distended Abdomen, found the Uterus as large as the Head of a full-grown Person. And when in the Presence of several Physicians and Surgeons, he took it out and attempted to cut it, he found the whole Substance of it so hard and scirrhus, that it was hardly to be divided by a sharp Knife. The Sides of the Uterus, when cut, exceeded three Fingers-Breadth in Thickness. And in its Cavity was found a thick scirrhus Body, as large as two ordinary Fists, and only in some Parts adhering to the Sides of the Uterus. In this Substance were found Atheromas, Cartilages, and even Bones. In the Middle of the Neck of the Uterus, there was found a similar Scirrhus, larger than an Hen's Egg. This Uterus, with its Contents, exceeded nine Pounds in Weight. *Hildanus*, also, in *Observat. Chirurg. Cent. 1. Cap. 65, 66, & 67.* furnishes us with Instances which sufficiently evince this.

But tho' Scirrhuses are most frequently found in the Parts of the Body here enumerated, yet they have, also, been found incident to other Viscera. Thus we every where read in practical Authors, that the Liver has been found scirrhus either in whole or in part. *Arctæus de Caus. & Sign. Morb. diuturn.* *Lib. 1. Cap. 14.* informs us, that a Scirrhus is a Disorder which is not only familiar to, but also lasts a long time in the Spleen. 'Tis also certain from Experience, that scirrhus Tumors have been found in the Stomach and Intestines. In the Abridgment of the *Philosophical Transactions*, *Vol. 3.* we have an Account of a scirrhus urinary Bladder, whose Membranes were a Quarter of an Inch thick.

Hence a Scirrhus may be produced by an Inflammation; by stagnant, caseous, indurated or coagulated Milk; by a Contusion; by strong Attrition; by Carbuncles; by Bubbles; by Ulcers too speedily closed; by the atrabilarious Matter of the Blood or Bile, especially when the Menfes or Hæmorrhoids are obstructed; by a lapidescent, gross, austere, and gyseous Matter; by a melancholy Life; by Hard-living; and by an hereditary Disposition.

As for an Inflammation; 'Tis observed under the Article INFLAMMATIO, that an Inflammation sometimes terminates in a Scirrhus; in which Case the Extremities of the obstructed Vessels, together with the stagnant Fluid with which they are infarcted, are not separated from the adjacent sound Parts; but the morbid Part still remains, and often acquires such a virulent Nature, that it can never after be resolved, but either continues during the whole Life, or must be removed either by the Knife or the Cautery. The ancient Physicians took notice of this Origin of a Scirrhus from an Inflammation. Thus *Arctæus*, in his *Treatise de Caus. & Sign. Morb. diuturn.* *Lib. 1. Cap. 13.* informs us, "That if the Liver is not suppured by an Inflammation, it generally happens, that in Progress of Time the hard Tumor is changed into a Scirrhus." And *Paulus Aegineta*, *Lib. 3. Cap. 68.* when treating of a Scirrhus of the Uterus, speaks in the following manner: "Sometimes the Uterus becomes suddenly scirrhus, without any evident Cause; tho' this Misfortune generally arises from a preceding Phlegmon, which is neither resolved nor converted into an Abscess." Such scirrhus Remains of an ill-cured Inflammation are found not only in the glandular, but also in other Parts of the Body. This was observed by *Galen*, when treating of the Cure of an Erysipelas, in his *Metb. Med. Lib. 14. Cap. 3.* For after he had said that an Erysipelas required greater Refrigeration than a Phlegmon, he informs us, "That by the incautious Use of refrigerating Medicines, the Skin becomes livid, or even black, especially in old Persons; so that some of the Parts thus refrigerated, cannot be perfectly cured by Discutients, but leave a certain scirrhus Tumor behind." In inflammatory Disorders a Scirrhus is, perhaps, frequently produced in such Parts as are not glandular, whilst by too frequent Venesections the Strength is so weakened, that the Impetus of the vital Fluid is not able to resolve the obstructing Molecules impacted in the narrowest Parts of the Vessels, nor to separate them by a gentle Suppuration. Hence, perhaps, it is, that after a Pleurisy not only the Pleura, but also that Part of the Lungs adhering to it, are indurated into a Scirrhus; for after the preposterous Cure of violent Inflammations, surprizing Degeneracies have been observed in the membranous Parts. Thus sometimes, and even oftener than is generally believed, the Pericardium is inflamed. And in Subjects who have died of long-protracted Disorders of the Breast, this thin membranous Bag of the Heart has not only been found surprizingly inspissated, but also indurated. Thus in the *Acta Physico-Medica*, *Vol. 2. Obs. 20.* in the Carcass of a Sailor, who had laboured under a violent Asthma and a Cough, and at last died of a dropical Tumor of the Abdomen, Scrotum, and Legs, the Pericardium, among other Disorders, was found an Inch thick, firmly adhering to the Heart, and of a cartilaginous Hardness; so that it would hardly yield to the Knife. For tho' *Malpighi*, in *Epist. ad Societat. Londin. de Structura Glandul. Conglobat.* and *Santorini*, in *Observat. Anatom.* found the Fabric of the Pericardium, when changed by Diseases, glandular; yet in this Case its membranous Substance seems to have degenerated, since no dilated and indurated Follicules were found; but the Pericardium was become cartilaginous.

A Scirrhus may be produced by stagnant Milk. A Scirrhus frequently arises from this Cause in the Breasts of Nurses; who, dreading a Suppuration, expose their inflamed Breasts to the Heat of the Fire, or foment them with Spirit of Wine: By this Means the Tumor is often lessened, since the thinnest Part of the Milk, stagnant in the lactiferous Duets, is either dissipated, or discharged from the Nipples; but the remainder is, by that means, rendered thicker, and often forms a Scirrhus not to be resolved by any Art.

A Scirrhus may, also, be produced by a Contusion: As 'tis certain, from Anatomy, that the Glands consist of numberless Arteries, by the various Disposition of which a thin Liquid is separated from the arterial Blood, which, when collected, is discharged from their Excretories, 'tis obvious, that when these Parts are injured by a Contusion, these Vessels may, by that means, be destroyed, or the Excretories of the Glands so compress'd or obstructed, that a free Discharge of the Liquid, secreted by the arterial Fabric of the Glands, is hindered. Hence by Stagnation, and an Exhalation or Resorption



sorption of the more liquid Parts into the minute Veins, there arises an Inspissation of the secreted Liquid, and a Tumor is form'd which is hard, scarcely capable of a Resolution, without Pain, and known by the Name of Scirrhus. But if an inveterate, hard, and rough Tumor of this Kind is accompanied with Pain, it is called a Cancer.

*A Scirrhus may, also, be produced by violent Attrition.* By this Means an Inflammation, and all its Consequences, may be produced. Thus in common Prostitutes, scirrhous Condylomas are frequently produced in the Vagina, by too frequent and violent Attrition. Those addicted to unnatural Lust, are, also, afflicted with scirrhous Tumors; whilst, as *Juvenal* happily expresses it:

— — — *Podice laevi*  
*Cæduntur tumidæ, medico ridente, Mariscæ.*

*A Scirrhus may also be produced by a Carbuncle.* This happens when, by a sudden and violent Inflammation, the Skin together with the subjacent Parts of the Tunica Adiposa, is converted into a dry and hard Eschar; the Cure of which consists in having its whole Circumference, by means of a Suppuration, so separated from the live Parts, that it may fall off. But if this cannot be obtained, after allaying the Inflammation of the adjacent Parts, such a scirrhous Tumor will remain, especially if it is lodged in the glandular Parts.

*A Scirrhus may, also, be produced by a Bubo.* Tho' Tumors of the Glands, in various Parts of the Body, are sometimes called Bubos, yet this Name is in a peculiar manner appropriated to Swellings of the inguinal Glands: Such Tumors are most frequently produced by a venereal Contagion, remain long, and prove obstinate against the best Remedies.

*A Scirrhus may, also, be produced, by closing an Ulcer too soon.* 'Tis frequently observed, that when a Phlegmon is converted into an Abscess, the middle Part is entirely soft and matured, though the whole Circumference of the Tumor is as yet hard, as is observed under the Article SUPPURATIO. Hence such an Abscess is not to be soon opened; but it sometimes happens that in the Top of the Abscess, the Integuments being rendered tense, and macerated by Cataplasms, are spontaneously ruptured, and afford a Discharge for the contained Pus, whilst the rest of the Matter remains crude and hard; unless such an Ulcer remains open, and is treated with such Medicines as excite a Suppuration, there often remains a scirrhus Hardness for a considerable Time; which, however, is generally gradually dissipated in such Parts as are not glandular. But when, after an ill-cured Suppuration, such a Hardness remains in the Breast, it often leaves a Scirrhus which cannot be resolved. But never is a Scirrhus more frequently produced by this Cause, than in venereal Buboes; when, for Instance, being suppurated, they are opened before a perfect Maturation; or when, after they are opened, the Surgeon, weary of the long-protracted Cure, attempts their Consolidation by desiccative Medicines; for in this Case something of a scirrhous Nature is always left.

*A Scirrhus may also be produced by the atrabiliarious Matter of the Blood, or of the Bile.* When the Blood is deprived of its most fluid Part, whether by violent Motion of the Body, or protracted Exercise of the Mind, then the remaining Part is blacker than usual, becomes incapable of Circulation, in Consequence of its Pitch-like Tenacity arising from an Union of the thick Oil of the Blood with its terrestrial Parts, and with greater Difficulty passes through the narrowest Parts of the Vessels. Hence this Matter, which is called Black Bile, is very fit for producing Obstructions; but when the Bile properly so called becomes stagnant in the Gall-Bladder, it may acquire a surprising Tenacity, and often degenerates into calculous Concretions. Such a sordid and tenacious Matter, produced by a Stagnation and Inspissation of the Bile, is, also, called black Bile; but it is far more acrid, and more easily becomes putrid, than the former Species produced from the Crassamentum of the Blood. This latter Species may disturb the whole Laboratory of the Bile, obstruct the Parts in which it is contained, and afterwards becoming putrid, produce the most terrible Disorders: But the former Species seems principally calculated for producing scirrhous Tumors; since the Blood, contaminated by such a Lensor, easily becomes stagnant in the intricate Structure of the Glands. Practical Observations evince, that scirrhous Tumors are most frequently found in such Persons as, in Consequence of a peculiar Idiosyncrasy, incline to an atrabiliarious Temperament, the Signs of which are enumerated under the Article TEMPERAMENTUM. The ancient Physicians almost always accused the black Bile, as the Cause of a Scirrhus and Cancer; and *Galen*, in *Method. Medend. ad Glaucon. Lib. 2. Cap. 12.* affirms, that the only Cause of a Cancer is when the black Bile collected in the Body is neither evacuated by the Hemorrhoids nor Varices, nor propelled to the Skin, but conveyed to other Parts of the

Body. In this Opinion he was confirmed by observing, that in the Parts thus affected, the Veins appeared full of a thick and black Blood: Why this should happen, is shewn under the Article CARCINOMA. The great Similitude between a Scirrhus and black Bile sufficiently evinces, that the former often arises from the latter; for the tenacious and pitch-like Humour, called Black-Bile, generally fills and obstructs the Vessels of the abdominal Viscera, and produces Diseases principally of a chronical Nature. When this stagnant black Bile, by any Cause, began to be collocated and corrupted, it was, by the antient Physicians, called the turgescient, or moved black Bile; and when it acquires such a State, it rages with incredible Fury, and excites, in the coldest Constitutions, the most acute Fevers, which soon prove Mortal. It, also, brings on the worst of Dysenteries, Corrosions of the Viscera, Deliriums, and, frequently, sudden Death. A Scirrhus may be long lodged in some Parts of the Body, without proving uneasy to the Patient, unless it happen strongly to compress the adjacent Vessels: But if the Matter of an inveterate Scirrhus begins to be moved, either spontaneously, or by imprudent Treatment, it soon degenerates into a terrible Cancer.

*Scirrhous Tumors are most generally formed in Women, when their Menses cease.* The most considerable Changes happen in the Bodies of Women, when their Menses first begin to appear, and when they cease in Women after the Season of Conception. The Observations of almost all Physicians evince, that about those Times, scirrhous Tumors are produced in the Uterus and Ovaria, by an Infarction of the Vessels; but there is so great a Consent between the Breasts and Uterus, that as soon as the Excretion of the uterine Blood is obstructed, the Breasts begin to swell, as appears in pregnant Women, as also in Child-bed Women, when, after the Cessation, or considerable Diminution of the Lochia, the Breasts become turgid with Milk: 'Tis, therefore, not to be wondered at, if, upon the Cessation of the Menses, the Breasts should be affected, their Vessels distended, and scirrhous Tumors formed. 'Tis, also, frequently observable, that scirrhous Tumors, produced by other Causes, are about this Time increased in Bulk, and often changed into Cancers. *Hippocrates*, in his *Treatise de Morb. Mulier. Lib. 2. Cap. 20.* informs us that "the Menses retained in the Uterus, regurgitate to the Breasts;" and after enumerating many Symptoms, by which Women were deceived into a Belief of their Pregnancy, he subjoins, "in their Breasts arise hard Tubercles, some of which are large, and some small. These never come to a Suppuration, but become gradually harder, till at last they terminate in occult Cancers." *Dionis*, in his *Cours d'Operations de Chirurgie demonst. 9.* concludes, from his own Observation, that among twenty Women afflicted with Cancers, fifteen are seized with this Misfortune between the forty-fifth and fiftieth Years of their Age; and he adds, that in a Journey through the Provinces of France, he saw many in the Hospitals, of almost every Town, afflicted with Cancers, but that the Patients were generally about the Age now mentioned; or if the Disorder happened to such as were younger, the menstrual Discharge was defective in them. *Hollerius*, in *Comment. 2. in Lib. 3. Coac. Hippocrat. No. 40.* informs us, that by the Retention, or scanty Discharge of the Menses, glandulous Tumors are, also, formed in other Parts of the Body; for, in one Year, he saw more than two hundred Girls, who, about the middle of the Spring, had Tumors formed on the Groin, in Consequence of a too scanty menstrual Discharge. And in the Case mentioned above, a Woman about the forty-sixth Year of her Age, before found, having her Menses suddenly suppressed, began to be sick; and when she died, upon opening her Body, the Mesentery, Pancreas, Stomach and Pylorus were found scirrhous; from all which it is sufficiently obvious, how much a Cessation of the Menses contributes to the Production of a Scirrhus, or to the Increase of it after it is already formed.

*Scirrhous Tumors are, also, very readily formed, upon a Suppression of the hemorrhoidal Discharge.* As the black Bile is frequently conveyed to the abdominal Viscera, and there produces many surprising Misfortunes, nothing seems more commodious than that the tenacious, and often pitch-like Blood should be evacuated by the hemorrhoidal Veins; and this is frequently observed in Persons of a melancholic Habit. Hence *Hippocrates*, in *Aphor. 12. of Sect. 6.* commends the Hemorrhoids as beneficial to melancholic Patients. When, therefore, the atrabiliarious Matter is retained, in Consequence of the Suppression of an usual hemorrhoidal Discharge, it may lay a Foundation for the most obstinate Obstructions in the glandular Parts, as we have already observed.

*A Scirrhus may, also, be produced by a lapidescent, gross, austere or gypseous Matter.* Unless it were certain, from numberless Experiments, it could hardly be believed that there is, even in the most fine and limpid Humours of the human Body, a certain Matter of which a pretty hard Stone may be formed.



form'd. Thus, limpid Urine separated from the Blood through the minute renal Ducts, often lays a Foundation for calculous Concretions, not only when it becomes stagnant in the Pelvis, Ureters and Bladder, but also in the Kidneys themselves, which have sometimes been found entirely calculous. I have seen, says *Vanfweiten*, many renal Stones discharg'd, which had Stalks, by which they seem to have been inserted in the renal Ducts, whilst the rest of their Surface was globular. I also saw, says the same celebrated Author, a small Stone extracted from the sublingual Gland. In the Cavity of the Abdomen, which is only moist with a fine exhaling Dew, small Stones have, also, been found. Calculous Concretions of this Kind have, in like Manner, been found in the Substance of the Brain, and almost in all the Parts of the Body. If, therefore, simular Concretions are form'd about glandular Parts, highly obstinate scirrhus Tumors will be produced. The Stones formed in the human Body are of various Degrees of Hardness; for sometimes they are excessively hard, as is principally observable in the Stones of the Bladder; at other Times they are far more soft and friable, as is principally observable in those form'd in the Gall-Bladder: And, says Doctor *Vanfweiten*, I have seen white friable Stones, almost resembling Plaster, thrown up from the Lungs in Coughing. And we are by *Paré* informed, that the Glands of the Mesentery were found scirrhus and turgid with a gypseous Matter.

*A Scirrhus may also be produced by a sorrowful Life:* In melancholic Disorders, this surprizing Circumstance is observ'd, that black Bile predominating in the Blood, and especially lodging about the Abdominal Viscera, produces such a strange Uneasiness, and so insupportable a Sadness, that the miserable Patients are often prompted to lay violent Hands upon themselves. It is, also, observable, that violent Passions produce a simular Matter in the Blood, and fix it in the Vessels of the Abdominal Viscera. Since, therefore, Sadness may produce atrabiliarious Matter, it is obvious, that it may, by that Means, lay a Foundation for a Scirrhus.

*A Scirrhus may, also, be produced by coarse Diet:* Among other Causes, Melancholy may be produced by austere, hard, terrestrial and dry Aliments, long used, especially if the Patient enjoys too much Rest and Ease. Hence studious Men are so often afflicted with Obstructions of the Abdominal Viscera, because they frequently use Flesh and Fish indurated by Salt, or in the Smoke or Air, Pease and Beans; whilst, in the mean Time, they employ their Minds intensely, without giving any Manner of Exercise to the Body; such Persons generally find to their great Injury, that these coarse and heavy Aliments are to be forsaken by them, and that the softest Pot-Herbs, such as Lettice, Endive, and Succory, together with the tender Fleashes of young Animals, agree far better with the Health of the Learned. When the Children of poor Persons eat farinaceous Substances, crude and unfermented, their Abdomens are rais'd into a Tumor, because their tender Viscera are insatiated with an insuperable Lentor. The like Misfortunes are produced in the Children of Country People, by greedily devouring austere and unripe Fruits.

*A Scirrhus may, also, be produced by an hereditary Taint:* That a Phthisis, Epilepsy, and Gout are transferr'd from Parents to Children, is certain from daily, but fatal Experience. The same, perhaps, holds true with respect to several other Disorders: And such hereditary Diseases, if not incurable, are yet by all Physicians reckoned very hard to be cured. The celebrated *Boerhaave* us'd on this Occasion to tell his Audience, that he knew a certain Family, all the Children of which, at a certain Period, became icteric, and at last died dropical, since their Disorder would yield to no Medicines; that the Cause of such a Misfortune might be discovered, and afterwards prevented, their Carcasses were cheerfully submitted to the Examination of Physicians, who, upon opening them, found the Liver scirrhus.

The Effects of a Scirrhus form'd are, by its increas'd Bulk to affect the adjacent Parts, to press upon them and compress them, to injure the peculiar Functions of the scirrhus and adjacent Parts, and by these Means to produce Inflammations, Suppurations, Gangrenes, Palteys, Atrophies, a Sphacelus, Sterility, difficult Labours, the Iliac Passion, and many other Disorders of the like Nature, which may be easily deduced from the Nature and Office of the injur'd and compressing Part.

The scirrhus Part is increas'd in Bulk, by which Means it must necessarily happen, that the Vessels of the adjacent Parts must be rendered narrower, and sometimes totally compressed. For this Reason, under the Article *Obstruction*, scirrhus Tumors are enumerated among the Causes which by

an external Compression of the Vessels lessen their Diameters. The Effects, therefore, of a Scirrhus may be numberless, and quite different, according to the Variety of the Parts affected, and the Functions of the Parts compressed by the increasing Scirrhus. Thus a Scirrhus form'd in the Breast of a sound Woman by an external Cause, often continues till the Patient is far advanced in Years, without creating her any Pain. But when a Scirrhus seizes the Oesophagus, or the adjacent Parts, which by becoming tumid can lessen and compress its Cavity, Deglutition is entirely obstructed, and after the Patient is tantalized, often for several Months, inevitable Death ensues. 'Tis, therefore, here sufficient to specify the general Sources from which the Effects of a Scirrhus may be deduced. But the Knowledge of the particular Disorders produced by a Scirrhus depends upon the Functions of the Parts affected; the most considerable, however, of these Disorders are here enumerated; such as

*Inflammations, Suppurations, Gangrenes, and a Sphacelus:* Under the Article *INFLAMMATIO*, where the Causes of an Inflammation are consider'd, 'tis observ'd, that all the Causes of Obstructions may produce an Inflammation: But, as has been just now observ'd, a Scirrhus is one of these Causes of Obstruction, which, by an external Compression, lessens the Cavities of the Vessels: But an Inflammation form'd may be succeeded by all its Effects, and consequently by a Suppuration, Gangrene, and a Sphacelus. 'Tis, however, to be observ'd, that a Suppuration never happens in a legitimate and confirm'd Scirrhus; but only in the adjacent Parts compressed by the tumid Scirrhus. Besides, under the Article *GANGRENA*, when the Causes of an Inflammation are consider'd, 'tis obvious, from the Observations of *Hildanus*, that a Gangrene was form'd in both Legs, in consequence of a scirrhus Tumor compressing the *Vena Cava* in that Part where it is divided into the two Iliacs; and this Gangrene was succeeded by a Sphacelus, which ascended to the Knees, and prov'd mortal to the Patient.

*A Scirrhus may also produce Palsies:* In order to the voluntary Motion of the Muscles, 'tis requisite there should be a free Communication through the Nerves, between the Brain and the Muscles. If, therefore, a Scirrhus should all along compress a Nerve distributed from the Brain to any Muscle, such a Muscle will be paralytic. Now, if a large, nervous Trunk, distributed to any Member of the Body, should be compressed by such a Cause, a perfect Palsy of that Member will be produced. When the subaxillary Glands becoming scirrhus and tumid, strongly compress the adjacent nervous Trunks, 'tis sufficiently obvious that a Palsy may be produced by this Means. Thus, says Doctor *Vanfweiten*, in a Woman of sixty Years of Age, I saw the whole right Breast scirrhus; after which the Glands under the right Arm-pit became tumid and hard, and this Circumstance was succeeded, first, by an intense Pain, and then by a Stupor and beginning Palsy in the whole Arm. The Glands, in the mean time, in the right Side of the Neck, were highly tumid and hard; whilst the Patient was subject to frequent Diliquiums, perhaps from a Compression of the *Par Vagum*, and the intercostal Pair of Nerves.

*A Scirrhus may, also, produce an Atrophy:* 'Tis observ'd under the Article *Vulnus*, that if a large Artery is so divided, that no more Blood can be convey'd to the Parts farther from the Heart than that Division, then all such Parts as received the vital Blood from this large Trunk become mortified, because they are entirely deprived of the Influx of the vital Fluid. 'Tis under the same Article, also, observ'd, that this may happen in two Manners; for the Fluids no longer propell'd by the Motion of the arterial Blood, either become stagnant and corrupted, by which Means a slow and putrid Gangrene is produc'd: Or, the Humours left in the Parts farther from the Heart than such a Division, by the proper Contraction of the Vessels, pass into the Veins, which by the Assistance of the adjacent turgid Muscles return the Humours they receive to the Heart: Thus the Vessels totally deprived of their Fluids will collapse, their collaps'd Sides will grow together, and the Bulk of the Part will be daily lessen'd, till at last becoming dry, it almost resembles Mummy, as is shewn by a surprizing Instance under the Article *Vulnus*. 'Tis sufficiently obvious, that the same Misfortunes must be produced, if a Scirrhus so compresses the Artery distributed to any Part of the Body, as totally to obstruct the Circulation of the Blood in it.

*A Scirrhus may, also, produce Sterility:* 'Tis not to be doubted but Sterility may be produced, in either Sex, if the Organs of Generation are so indurated into a scirrhus Tumor, as either to abolish or lessen their peculiar Functions. Thus, 'tis certain, from many Observations, that the Testes in Men may become scirrhus. But since in Women there are still more Conditions absolutely necessary, not



not only for the Reception of the Rudiments of the Fœtus, but also for its Retention, Support, and Nourishment, to perfect Maturity in the Uterus, 'tis sufficiently obvious, that the Causes of Sterility are far more frequent in Women than in Men. 'Tis certain from Experience, that scirrhus Tumors, either in the genital Parts or those adjacent, and by their Bulk compressing all the contiguous Vessels, frequently prove the Causes of Sterility. *Hippocrates*, in his *Treatise de Natura Muliebri*, cap. 19. observes, that in fat Women the thick Omentum so compresses the Uterus, that they are incapable of Conception. In the same Part he informs us, that if the Mouth or Neck of the Womb is scirrhus, which may be discovered by introducing the Fingers, the Woman will be barren, unless that Disorder is cured. By laying open Carcasses, it has often appeared, that scirrhus Tumors of the Uterus have been the Causes of Sterility. *Hildanus* in *Observat. Chirurg. Centur. I. Obs. 65.* informs us, that upon the Death of a Woman of sixty Years of Age, who had been twice married, but remained barren, he laid open her Body, in order to discover the Cause of her Sterility, upon which he saw a Scirrhus, which like a Ring encompass'd the Neck of the Matrix, and so clos'd up its Aperture, that the Point of a Probe could hardly be introduc'd into it. In the same *Century*, *Obs. 66.* he informs us, that in another Woman, who in her first Labour being seized with an Inflammation of the Uterus, afterwards remained barren, he, after her Death, found a Scirrhus as large as a Goose's Egg, so situated before the Mouth of the Uterus, as intirely to block up the Passage to it; and so strongly adhering, that it was impossible to separate it. I saw, says *Vansweiten*, the whole Vagina scirrhus, and so tumid, that it would hardly admit a Probe. 'Tis, also, observable, that in such Women as have lived barren, a cancerous Disposition of the Uterus is produced, about the Time that the Menfes generally cease; and this Disorder sufficiently manifests its Malignity by the excessive Pains, the acrid Sauces discharg'd, and the profuse Hemorrhage subsequent to the varicose State of the Vessels, which are at last corroded; from all which it is obvious, that a Scirrhus is justly reckon'd among the Causes of Sterility.

A Scirrhus may also produce difficult Labours: That the Fœtus, when arriv'd at a State of Maturity, may be discharg'd from the Uterus, 'tis requisite that its Orifice and Vagina should be capable of a free Expansion: If, therefore, these Parts are indurated by a scirrhus Tumor, or if such Tumors in the adjacent Parts should compress these Parts, 'tis sufficiently obvious, that the Birth must, by this Means, be render'd difficult, and sometimes absolutely impossible. 'Tis true, that a Scirrhus is rarely so soon enlarged to so great a Bulk, as, if it did not exist before the Conception but is form'd during Pregnancy, to do a great deal of Injury when the Fœtus is to be excluded. But a Scirrhus form'd in the Uterus or Vagina, must, in all Probability, lay a Foundation for Sterility; for which Reason it is enumerated among the Causes of that Misfortune. 'Tis, however, certain, that some Women have become pregnant, tho' the Aperture by which the Semen was convey'd into the Uterus was very small. Hence absolute Sterility is not always produc'd, tho' there is a large Scirrhus in these Parts, tho' in such Cases the Labour will always be difficult. In practical Authors there are many Observations which confirm this Doctrine. Thus, says *Vansweiten*, I knew a Woman of thirty-eight Years of Age, who died during Labour of her first Child, neither could the Fœtus be brought into the World. In the *Hist. de l'Acad. des Sciences*, for the Year 1705, the celebrated Mr. *Littre* informs us, that in the Carcass of a certain Woman he found the Neck of the Uterus clos'd up by a glandular Substance, which adher'd to the Uterus, and was here and there perforated with small Holes. In the *Medical Essays*, Tom. 3. we have an Account of a Woman of forty Years of Age, who in her first Labour could only have the Fœtus extracted dead, on account of the excessive Narrowness of the Pelvis: Three Months after Marriage becoming pregnant, she was about the Time of the Delivery, for two Days, rack'd with intense Pains, without any Dilatation of the Mouth of the Uterus. As the Surgeon had not a Speculum Uteri at hand, he separated the Sides of the Vagina with a coarse Instrument, upon which the Ciertrice of the Orifice of the Uterus, which was grown together, appeared; and when with a Knife the Surgeon was laying open the Mouth of the Uterus, he found a cartilaginous Hardness all round it, and was forced to make many small Incisions in it, before he could procure a sufficient Dilatation: A dead Fœtus was extracted by the Surgeon's Hand, upon which the Patient was immediately seiz'd with an acute Fever, a pleuritic Pain, and an obstructed Respiration, which in twenty-four Hours proved mortal. *Hildanus* in *Observat.*

*Chirurg. Cent. I. Obs. 67.* informs us, that in the Carcass of a Woman who died, after suffering her Pains of Labour six Days in vain, he found the Uterus torn, and the Head of the Infant sticking in the Cavity of the Abdomen. The Cause of this Misfortune was a Scirrhus, almost as large as the Head of the Fœtus, and which by its Bulk hinder'd the Exclusion of the Infant.

A Scirrhus may also produce the Iliac Passion: Whatever Cause is capable of so contracting any Part of the intestinal Canal, that its Contents, which by the peristaltic Motion ought to be propell'd to the Anus, cannot pass, may produce this terrible Disorder. Hence, the peristaltic Motion being inverted, the Contents of the Intestines return to the Stomach, and after great Uneasiness, are vomited up in a most unseemly Manner. When an Inflammation accompanies this Disorder, it often proves mortal. But when it has no concomitant Inflammation, the Patient may, for a long Time, be afflicted with it. It has been frequently observ'd, that scirrhus Tumors compressing or totally obstructing the Intestines, have laid a Foundation for the Iliac Passion. *Hildanus*, in *Observat. Chirurg. Cent. I. Obs. 69.* informs us, that in the Carcass of a Man who for some Years labour'd under a fixed and continual Pain, under the Region of his Liver, and at last died of a violent Iliac Passion, he found an exulcerated Scirrhus in the Bottom of the Intestinum Cæcum. The celebrated *Boerhaave* saw a remarkable Case which confirms this Doctrine. A lively Boy, the Son of a Family of Distinction, happening to over-heat himself by skating, went into the Sledge in which his Father was, where he remained for about an Hour, exposed to a pretty intense Cold: Soon after he perceived a Pain in his Abdomen, and was continually in a languishing Condition. A few Weeks after this he began to be costive, till at last the Discharge of his Fœces was almost entirely suppress'd: His Appetite remained pretty good, though every three Days, after great Uneasiness, he vomited up all the Aliments he had used during that Time. After using various Medicines to no Purpose, the Boy died, and the Body was inspected by the Physicians employed whilst he was alive, and who were of different Opinions with respect to the Disease. *Boerhaave* prognosticated that his Misfortune proceeded from a latent Scirrhus, and for that Reason only prescribed gently resolvent Medicines, and such Aliments as could generate but a small Quantity of Fœces. Other Physicians concluded, that the pituitous Sordes lodged in the Intestines, and obstructing them, was to be eliminated by Vomit; and persuaded the Boys Parents to have him treated in this Manner. But all the Symptoms were increas'd by these Means. Upon opening the Carcass, there was found a Scirrhus compressing the Intestinum Ileum, in that Part where its Extremity is inserted in the Intestinum Colon. Before the obstructed Part, the small Intestines appeared enormously dilated; but behind it, so contracted, that they hardly surpassed the Bulk of the Vermiform Process.

Besides the Disorders now enumerated, many more may arise from Scirrhuses form'd in other Parts of the Body. Thus we read in practical Authors, that fix'd chronic Pains are produced by scirrhus Tumors of the Stomach and Pancreas, tending to the Malignity of a Cancer. A Scirrhus of the Liver often produces an incurable Jaundice, and afterwards a mortal Dropsy. From what has been said, 'tis sufficiently obvious, that many obstinate chronic Disorders arise from scirrhus Tumors form'd in the internal Parts of the Body. We now come to consider the diagnostic and prognostic Signs of a Scirrhus.

A Scirrhus is known to be present from a Knowledge of its Causes, Effects, and Symptoms, together with an Acquaintance with the Part affected, and the Temperament of the Patient.

A Scirrhus formed in the external Parts of the Body is easily discover'd, but with more difficulty known when concealed in the internal Parts. But obscure Cases of this Nature are illustrated by a Consideration of the following Circumstances.

As for the Cause of a Scirrhus: If the Cause predisposing to the Generation of a Scirrhus is an atrabiliarious Spissitude of the Humours, arising from a long protracted Use of austere, terrestrial and coarse Aliments, without violent Exercise; or from a long-continued Influence of Passions, especially Grief; and if, at the same Time, the efficient Cause is a Contusion; if an Inflammation is neither resolv'd nor changed into a Suppuration; if the usual Discharge of the Menfes or Hemorrhoids is suppress'd; or if the Taint is hereditary, we may from such preceding Causes justly dread a Scirrhus.

As for the Effects of a Scirrhus: A Scirrhus always injures not only the Functions of the Part affected, but also frequently



frequently the Action of the adjacent Parts, which it compresses by its Bulk. Hence, if the Causes fit for producing a Scirrhus have preceded, if the Signs of the injured Functions evince that the Uses of certain Parts, which they enjoy'd in a sound State, are disturb'd, or totally abolish'd, and if the Disorder long continues in the same State without any considerable Increase, the diagnostic Signs of a present Scirrhus are by these Means strengthened. Thus, for Instance, if after an acute Disorder of the Breast, which is neither cured by a gentle Resolution, nor a benign Suppuration, a Difficulty of Breathing and a dry Cough remain; and if these Symptoms are increased after the least Exercise, or a liberal Use of Aliments, we may justly conclude that a Scirrhus is form'd in the Lungs; which by its Bulk straitening the Air Vessels of the Lungs, renders Respiration difficult; and by compressing the Blood-Vessels, hinders the Blood expell'd from the right Ventricle of the Heart from being freely convey'd through all the narrow Parts of the pulmonary Artery. Hence the Motion of the Blood being increas'd by Exercise, or a large Quantity of crude Chyle being mixed with the venous Blood in the right Ventricle of the Heart, the Lungs begin to be compress'd, and the Resistance made to the Action of the right Ventricle of the Heart is increas'd, and this increas'd Resistance cannot be surmounted by all the Efforts made by such a Patient for augmenting his Respiration. A latent Vomica of the Lungs compressing the adjacent Parts, will produce the same Symptoms; but the Uneasiness will be augmented in Proportion to the Increase of the Pus, till the Patient is either suffocated, or freed from his Disorder by a Rupture of the Abscess. A gentle hectic Fever, the almost perpetual Concomitant of a Scirrhus of the Lungs, will sufficiently discover such a latent Disorder. In a Scirrhus, also, of the Lungs, all Circumstances for a long Time remain in the same Condition; and the Symptoms often continue for several Years, without any Increase.

*As for the Symptoms of a Scirrhus:* When this Disorder affects the external Parts, it is known by a Tumor, Hardness, and Absence of Pain: But when it seizes the internal Parts, these Phænomena cannot be discovered by the Senses; in which Case the Effects of a Scirrhus are only capable of guiding the Physician's Judgment, and directing his Practice.

*As for the Part affected:* 'Tis already observ'd, that scirrhus Tumors are principally form'd about glandular Parts, especially if the Fluid secreted by the Fabric of the Glands is naturally easily inspissated, such as the Milk in the Breasts, for Instance. Hence scirrhus Tumors are by slight Causes produced in these Parts.

*As for the Constitution of the Patient:* An atrabiliarious Habit, as is already observ'd, most powerfully contributes to the Production of a Scirrhus; and the Signs of such an Habit are enumerated under the Article TEMPERAMENTUM.

From the Circumstances enumerated above, the Termination of a Scirrhus may be prognosticated, considering at the same Time the Duration and Effects of the Disorder: And a Scirrhus, which is of its own Nature benign, by an increas'd Circulation of the Humours acquires a malignant Quality.

In prognosticating, we not only determine the easy or difficult Cure of a Scirrhus known from its diagnostic Signs, but also foresee the Misfortunes which will be produced by the Injury done to the Functions of the scirrhus Parts, or of the adjacent Parts compress'd by the Bulk of the Scirrhus. The Prognostic, therefore, of a Scirrhus, is to be deduced from the same Circumstances on which its diagnostic Signs are founded. Thus, for Instance, a Scirrhus arising from an atrabiliarious Spissitude of the Humours, is with far greater Difficulty cured, than a Misfortune of the like Kind remaining after an Inflammation. For greater Misfortunes are to be dreaded, when a Scirrhus adjacent to large Vessels compresses them, than when a Scirrhus seizes the Breast, in which Case it hardly creates any Uneasiness to the Patient, unless it degenerates into a Cancer. But in forming the Prognostic of a Scirrhus, the Physician is principally to attend to the Duration and various Effects of the Disorder; for, as we shall afterwards shew, there are generally great Hopes, that a recent Scirrhus may be cur'd; whereas, when it is of several Years standing, it is incurable, except there is a Possibility of extirpating it. The Effects of a Scirrhus are various, according to the Diversity either of the Parts immediately affected, or of those compressed by its Bulk.

As a scirrhus Tumor is without Pain, it is not naturally productive of great Misfortunes, except when situated in those

Places where, by compressing the adjacent Parts, it disturbs some considerable Functions of the Body. Thus, says Doctor *Vanswieten*, I have known a scirrhus Tumor lodg'd for twenty Years and more in the Breast, without producing any Inconvenience. And 'tis certain, from the Observations of practical Authors, that Tumors of this Kind have been conceal'd in the internal Parts of the Body, without any great Detriment to Health. Thus, in the *Hist. de l'Acad. des Sciences* for the Year 1700, Mr. *Littre* informs us, that in a Man of sixty Years of Age, killed by a Fall from an Height, he found the whole Spleen putrified, though the Man had never complained of any Disorder, but always lived in an apparently sound and healthy State. But the Bulk of this Spleen must have been very small, since it only weigh'd an Ounce and an Half, and consequently could not by its large Size greatly press upon the adjacent Parts. *Hippocrates*, in his Treatise *de Affectionibus*, cap. 5. when treating of splenic Persons, speaks in the following Manner: "In process of Time, a splenic Disorder degenerates in some Patients into a Dropsy, and they waste away. In some others, the Spleen comes to a Suppuration, and the Patients, when cauteriz'd, are cur'd; whilst in others the Spleen becomes hard, and large, in which Case the Misfortune lasts till the Patient becomes old: But Disorders of this Kind are produced, when in consequence of Fevers, or the preposterous Cure of any other Disease, Bile, or Phlegm, or both, are deposited on the Spleen; and though Misfortunes of this Kind are long protracted, yet they are not mortal". If, however, the Nature of a Scirrhus is consider'd, it will be sufficiently obvious, that numberless Disorders may arise from it, provided, by any Cause whatever, the Motion of the Humours through the Vessels is augmented: For in the Scirrhus there remains a Liquid, coagulated or inspissated, either collected in the Follicles, or dispersed through the highly intricate Fabric of the vascular Parts. This Liquid may, therefore, be conceived as a dead and unactive Body lodged in these Parts: But the Vessels fill'd with this stagnant Liquid, or the Follicles, distended by its Means, in their Membranes, contain Vital Vessels, which being straiten'd by the Compression of the scirrhus Concretion, the Circulation of the Humours becomes more difficult, tho' it may as yet be carried on where the Motion of the vital Fluids is moderate. But if by a Fever, for Instance, the Velocity of the Circulation is increas'd, these vital Vessels, every where compress'd by the scirrhus Concretion, cannot be so dilated, that in the same Time a larger Quantity of Fluids will be convey'd through them: Hence an Obstruction will be form'd in them, and by a quicker Circulation of the Humours, an Inflammation. But since, in consequence of this strong Attrition in these contracted Vessels, a pretty strong Heat must be produced, as is observ'd under the Article INFLAMMATIO, a Putrefaction of that scirrhus Concretion will soon after ensue, and all the Misfortunes enumerated under the Article CANCER be produced. The Reason is therefore obvious, why a Scirrhus, which is of its own Nature benign, may, by an increas'd Velocity of the Circulation, be render'd malignant.

As this accelerated Motion of the Fluids often cannot be avoided, a Scirrhus lays a Foundation for constant Dread and Terror.

No Physician is possess'd of so uncommon Skill, as at all Times to prevent an accelerated Circulation of the Fluids in his own Body; for the Passions of the Mind, which can neither be avoided by any, nor duly check'd by the wisest, often greatly augment the Impetus and Velocity of the Circulation, as is observ'd under the Article SANGUIS. Slight Errors with respect to Diet, may, also, sometimes produce the same Effect; and an increas'd muscular Motion will prove hurtful in the same Manner. But Patients can never be prevail'd upon to avoid these Things with due Caution, since a Scirrhus, in consequence of its Freedom from Pain, is almost always neglected. But though the Patient was, with the greatest Caution, to follow these Dictates, yet he cannot possibly guard against the Irritation of a mild Scirrhus, either by the Shocks of epidemical Disorders, external Injuries, a Contusion, for Instance, or other Misfortunes of a like Nature. Besides, the Changes naturally incident to the human Body are capable of converting a Scirrhus into a Cancer: Such as the Cessation of the Menstrua, for Instance, in Women past the Date of Conception, as is shewn under the Article CARCINOMA. 'Tis, therefore, obvious, that a Scirrhus in any Part of the Body lays a Foundation for the constant Dread of a more terrible Misfortune, since no Art nor Care are sufficient to prevent all the Causes capable of changing a benign Scirrhus into the most malignant Cancer.



Hence the Physician is to observe,

*1mo*, That the Cure of a Scirrhus, which is recent, benign, situated in a proper Place, not perfectly hard, and afflicting a Person whose Juices are laudable, is to be attempted by emollient and resolvent Medicines; the most considerable of which are acid Fumes, and Mercury duly used.

In the Cure of a Scirrhus great Prudence is requisite, and nothing is to be attempted rashly, since Errors committed cannot afterwards be rectified, but bring on a Train of terrible Misfortunes. Physicians and Surgeons ought, therefore, always to remember the salutary Advice of *Hippocrates*, who, in *Aphor. 38. Sect. 6.* informs us, "That it is expedient not to attempt to cure Patients afflicted with occult Cancers, since by these means they soon die; whereas those whose Cures are not attempted, live for a great while." By occult Cancers, *Hippocrates* seems to have meant malignant and inveterate Scirrhuses, which are so easily irritated by the Application of Medicines, and degenerate into exulcerated Cancers. Before, therefore, any Remedies are applied to a Scirrhus, the Physician ought carefully to examine whether it is capable of being resolved. But this is known from its having the following Qualifications.

*If it is recent*; For in this Case, the concremented Humour has not, in Consequence of the Dissipation of its most liquid Parts, degenerated into an irresoluble Mass; and in a recent Scirrhus the whole Substance of the Gland is rarely affected. Hence there is a better Opportunity of conveying to the affected Part, through the as yet pervious Vessels, resolvent Medicines, whose Efficacy will be still the greater upon the scirrhusous Concretion, because it has not as yet acquired a calculous Hardness. If, therefore, a Scirrhus has for several Months affected any Part of the Body, only small Hopes of its Resolution remain. Hence *Aretæus*, in his *Treatise de Curat. Morb. diuturn. Lib. 1. Cap. 14.* when treating of a Scirrhus of the Spleen, justly advises "to prevent approaching, and resolve beginning Scirrhuses." But in the same Passage he informs us, that the Resolution of a Scirrhus is not very easy.

*If the Scirrhus is benign*; So long as the Scirrhus is without Pain, not too large nor hard, the Colour of the Integuments unchanged, and no Itching and preternatural Heat perceived in the affected and adjacent Parts, the Scirrhus is said to be benign: But if it is attended with the opposite Symptoms, it is said to be of the malignant Kind; the Signs of which are hereafter enumerated.

*If the Scirrhus is situated in a commodious Place.* If, for instance, Medicines can be commodiously applied to it, and an Access is given to the Surgeon's Hand, that if, contrary to Expectation, a Scirrhus before benign, being irritated by the Application of Medicines, may be extirpated by means of the Knife.

*If the Scirrhus is not perfectly hard.* For a stone-like Hardness, and a rough uneven Surface, indicate a confirmed Scirrhus, which will soon degenerate into a higher State of Malignity, by the Application of the most mild and resolvent Medicines. The Scirrhus, therefore, ought to yield to any Pressure; otherwise 'tis to be dreaded that the Vessels and Liquids coagulated in them, are almost concremented into an irresoluble Mass.

*If a Scirrhus seizes any Part of a Body whose Juices are sound.* For since, as we have already observed, an atrabiliarious Cacochymy greatly favours the Production of a Scirrhus, it will be of no Service, by many Efforts, to resolve the Matter impacted in the Vessels; if, after its Resolution, a similar Obstruction is soon produced by the same Cause. Thus, for Instance, if the Mass of Blood is affected with an acrid and putrid Scurvy, a Putrefaction, in this Case so hurtful, is to be dreaded, whilst the Resolution of the Scirrhus is attempted by emollient and resolvent Medicines.

So many Precautions are requisite, in order to cure a Scirrhus in a safe and proper manner: But fraudulent Quacks, cheating Old-Women, and too often imprudent Chymists, presumptuously confiding in their Arcanums, despise the Dangers of which they are ignorant; and by their pompous, but delusive Promises, precipitate Persons into the greatest Miseries.

But when, after a mature Consideration of all Circumstances, it is probable that a Scirrhus is capable of Resolution, Emollients which relax the Vessels, and Resolvents which, without exciting a great Commotion, fuse the concremented Humours, are the only Medicines to be used. *Aretæus*, in his *Treatise de Curat. Morb. diuturn. Lib. 1. Cap. 14.* asserts, that in order to remove a scirrhusous Hardness of the Spleen, we are to use Medicines as hot as Fire; but immediately after he orders the Parts to be sprinkled with Oil, Vinegar, and Honey; as also with the Powder of the Glands Unguentaria. For the same purpose he also recommends soft and emollient

Cataplasms. *Galen*, in his *Treatise de Method. Medend. Lib. 14. Cap. 4.* when treating of the Cure of a Scirrhus, lays it down as a practical Rule, "That if any one attempt an Evacuation with violently attractive and discutient Medicines, without softening the Tumor, and colliquating the concremented Juices by moistening and heating Substances, the Cure will for a few Days at the Beginning seem to proceed excellently. But the Remainder of a Disorder, thus treated, will be incurable, for by this means, also, the most subtle Parts being dissolved, what remains will be similar to a stony Concretion." The Truth of this Doctrine is sufficiently evinced in Nurses, who, in order to avoid a Suppuration, expose Tumors formed in their Breasts to the Live-Coals, and rub them; for by this means the Tumor is soon lessened, and a Suppuration prevented; but an incurable Scirrhus remains all the Patient's Life after. In such Cases nothing is more proper than twice a Day to expose the Part affected to the Steam of tepid Water; then to rub it softly, and apply some aromatic Plaister, especially with an Addition of the ferulaceous Gums, such as Gum-Ammoniac, Sagapenum, Galbanum, and others of a like Nature. Fomentations and Cataplasms, prepared of similar Substances, may also answer the same Intentions. Thus:

Take of the Flowers of Marsh-mallows, Chamomile, Melilot, and Elder, each one Handful; of the Lesser Centaury, half an Handful; of the Leaves of Worm-wood, White Hore-hound, Rue and Savin, each one Handful; of White Briony-Root, four Ounces; and of Garden-Angelica, one Ounce: Boil in Water in a close Vessel, and, straining the Liquor through a Cloth, with every four Pints of it mix four Ounces of the Spiritus Vini Theriacalis. Apply to the naked Skin with woollen Cloths, laying over them a Swine's Bladder anointed with a little Oil.

Of the above-mentioned Ingredients boil a proper Quantity in as much Water as is sufficient for making a Cataplasma; adding towards the End, of Gum Galbanum dissolved with the Yolk of an Egg, three Ounces; of Linseed-Meal, two Ounces; and of Linseed-Oil three Ounces.

A Plaister for a Scirrhus is prepared in the following manner.

Take of Gum-Ammoniac, Galbanum, Sagapenum and Opoponax, each two Ounces: Melt all together in an earthen Vessel over a gentle Fire, and depurate; then mix intimately with the whole four well-beaten Eggs; of yellow Wax, two Ounces; of the Meal of White Briony-Root, three Ounces; and of the Oil of Rue, by Infusion, a sufficient Quantity.

By this Method, says *Panfwritten*, continued for some Months, I have frequently cured recent scirrhusous Tumours of the Breast. I have, also, seen happy Effects produced by so thick a Solution of Venice-Soap in Milk, as to resemble a thin Poulitice, received into a Sponge, and applied to the scirrhusous Part, with a Swine's Bladder anointed with Oil, over it.

Acid Fumes, especially those arising from vegetable Juices, prepared by Fermentation, such as Vinegar for instance, are of great service in resolving scirrhusous Tumors. This Method is, by *Galen*, in *Method. Medend. Lib. 14. Cap. 5.* greatly recommended; for he would have the Application of Emollients to be interposed with the Use of such Medicines as attenuate and incide the Matter of the Scirrhus; and he extolls Vinegar as the best of the inciding Liquors. For the Cure of scirrhusous Indurations of the Tendons and Ligaments, he extinguishes the ignited Fire-Stone, or a Piece of a Millstone, in the strongest Vinegar, and orders the scirrhusous Tendons and Ligaments to be moved up and down over the ascending Steam; after which he again applies the emollient Remedies. He was, however, afraid lest the Steam of the Vinegar too long or often applied, should injure the Substance of the Tendons and Ligaments; but affirmed that its Use was safe in a Scirrhus of the Spleen, or any fleshy Parts. He also informs us, that he invented some compound Medicines prepared of Vinegar, and procured a perfect Cure of a scirrhusous Spleen, by the Application of Gum-Ammoniac dissolved in Vinegar to the Consistence of Clay, without any other Remedy. But in his *Method. Medend. ad Glaucon. Lib. 2. Cap. 6.* he excellently observes, that by the Use of laxative Medicines, the Scirrhus was mollified, but not diminished; whereas its Bulk was considerably lessened by the Application of Medicines prepared of Vinegar; for which reason, he recommends the alternate Use of these Remedies. *Galen*, also, in the same Book, *Cap. 7.* recommends the internal Use of Vinegar for curing a Scirrhus of the Viscera; and informs us, that



in a Scirrhus of the Spleen external Applications alone are not sufficient; since, in order to the Cure, the Patient must drink strong Potions prepared of the Barks of Caper-Roots and Spleen-Wort, together with the Roots and small Branches of the Tamarisk boiled in Vinegar or Oxy-mel. The Observations of the Moderns sufficiently evince the salutary Use of Vinegar, in resolving scirrhus Tumors, whether its Steam acts upon the Part affected; whether it is used by way of Fomentation; or whether, being mixed with the ferulaceous Gums, it is applied to the Part affected. 'Tis customary almost in all Shops to dissolve Gum-Ammoniac, Galbanum, Opoponax and Sagapenum in Vinegar; and then to depurate them by straining them. After which they are again dried by means of a gentle Fire. But this Method of Preparation seems not only to have been designed for the Depuration of these Gums, but also that the most acrid Parts of the Vinegar, whose thin and aqueous Parts are dissipated, might be united with the Gums, and their Efficacy, in dividing and attenuating Concretions, by that means increased. Thus *Hildanus*, in *Observat. Chirurg. Cent. 1.* informs us, that a robust young Woman, when suckling a Child, had her Left-Breast inflamed; but when the Inflammation was removed, there remained an hard Tumor, which the Women and Quacks in vain endeavoured to remove by many Medicines. But when *Hildanus* was called, he ordered the Infant to be weaned, and the Breast to be daily anointed with a Liniment, which, among other Ingredients, contained a large Quantity of Gum-Ammoniac dissolved in Vinegar of Squills. He, also, twice a Day applied an emollient Cataplasim; and by this Method, exhibiting at proper Intervals a gentle Purgative, the hard Tumor was entirely resolved. The same Author affirms, that the like Measures proved successful with him in a similar Case.

There is, perhaps, no internal Medicine more efficacious than Vinegar saturated with an highly pure alkaline Salt; or if to a Pint of *Rhenish* Wine, we add half an Ounce of the Salt of *Cardus Benedictus*, of the Stalks of Beans, or some such Substance, of which Mixture the Patient is to take half an Ounce three or four Times a Day. The Ancients greatly extolled the Use of such Medicines. Thus *Pliny*, in *Histor. Natur. Lib. 23.* informs us, "That the Ashes of the Twigs of Vines and vinaceous Trees, when mixed with Vinegar, cure Condylomata, and other Disorders of the Anus; that they cure Tumors of the Spleen, when mixed with Oil of Roses, Rue and Vinegar; and that the Ashes of Twigs sprinkled with Vinegar, cure Disorders of the Spleen." The Steam of kindled Sulphur directed to the scirrhus Part, is, also, greatly commended; but as it is offensive to the Lungs, it cannot, for that Reason, be properly used. The known Virtue of Vinegar, in dissolving the Blood, also, affords greater Hopes of a Cure in such Cases; whereas the Acid of Sulphur, especially when strong, induces a Coagulum of the Blood.

The Efficacy of Quicksilver in removing Obstructions, is universally acknowledg'd; and both the external and internal Use of it has often greatly contributed to the Cure of a benign and beginning Scirrhus: For when it has acquired a stony Hardness, and begins to be malignant, no Relief can be expected from the strongest mercurial Preparations, nor from a Salivation excited by Quicksilver, but all the Symptoms are rather increased by these Means; and, in consequence of the increased Motion of the Humours, the Scirrhus is sooner changed into a Cancer. To a resolvable Scirrhus the Emplastrum de Ranis with Mercury is generally applied with Success, only we must take care, lest, by an imprudent Application of it, a dangerous Salivation should be excited, which frequently happens. Hence, as soon as the Patient begins to perceive any Pain or Tension about his Gums, the Plaster is to be taken off, and the Part to which it adhered carefully washed with a Lixivium of Soap. This Plaster generally produces happy Effects in the Resolution of scirrhus venereal Buboës. The Steam of kindled Cinnabar proves beneficial, since the Virtues of the Sulphur and Quicksilver are united, but it often excites a sudden Salivation.

2<sup>do</sup>, If the Scirrhus does not yield to these Medicines; if its Place, Situation, adjacent Parts, Mobility, the State of the Disorder, and the Strength and Condition of the Patient permit, it is with all Expedition to be totally extirpated with the Knife.

If, after the Use of these Measures for several Weeks or Months, the Tumor is not diminished, nothing remains but to extirpate it, lest being left, it should lay a Foundation for the perpetual Dread of a Cancer. 'Tis, also, expedient to take this Step as soon as possible, because such a Scirrhus, when long left, is generally increased in Bulk, and often adheres to the adjacent Parts, in consequence of which the Ex-

tirpation is afterwards far more difficult, and often impossible. Besides, it often happens, that the Disorder is propagated to the neighbouring Glands, in which Case several Scirrhuses must be extirpated before a perfect Cure can be obtained: For it rarely happens, that large and irresolvable Scirrhuses are lodged long in the Breasts, before the subaxillary Glands are affected with the like Disorder. Thus, says Doctor *Van-sweiten*, in a Woman who, by means of an external Contusion, had a Scirrhus formed in her Breast, which by the frequent Application of almost boiling Spirits of Wine, had assumed a stony Hardness, not only the subaxillary Glands, but also the whole Breast, Neck and Shoulder of the same Side become hard. But it can never be too warmly inculcated to Surgeons never to think of the Extirpation of scirrhus Tumors, unless they are absolutely certain that they can be totally removed: For if the smallest Part should remain after Extirpation, it will soon degenerate into a Cancer, as is certain from fatal Experience. Before, therefore, the Extirpation of a Scirrhus is resolved upon, the following Circumstances are to be duly considered.

*As for the Place of the Scirrhus*; This ought to be such as to afford an easy Access to the Hands and Instruments of the Surgeon: For none was ever so far deserted by his Reason, as to think of the Extirpation of internal scirrhus Tumors. Tho' *Tulpius*, in *Observat. Med. Lib. 3. Cap. 34.* informs us, that in a Widow of fifty Years of Age, he saw a Scirrhus, formed in the Vagina, as large as an ordinary Fist, covered with a thick coarse Membrane, within white and resembling the Substance of a Man's Testicles, happily extirpated by a skilful Surgeon, without any Injury done to the adjacent Parts, by which means the Patient was freed from a woeful Train of Misfortunes; since the Tumor, when cut out, afforded pretty satisfactory Proofs, that the Scirrhus was degenerating into a Cancer.

*As for the Situation of a Scirrhus, and the Parts adjacent to it*; These are principally considered with respect to the large Vessels adjacent, and from an Injury done to which, great Danger arises; if, for instance, there was a Necessity for extirpating the subaxillary or parotid Glands: Nor even in these difficult Cases is the skilful Surgeon absolutely to despair of Success; since 'tis certain from Experience, that expert Surgeons have extirpated Scirrhuses even in these Parts. Thus *Hildanus*, in *Observ. Chirurg. Cent. 2. Obj. 79.* informs us, that he extirpated from a Woman's Breast a Scirrhus already become cancerous; and that he happily extirpated three other Scirrhuses under the Axilla of the same Side, one of which was as large as an Egg; to the Vessels distributed to it he applied a Ligature, for fear of the Hemorrhage justly to be dreaded on such an Occasion. *Abraham Kaau*, in his *Dissertatio de Scirrhis*, informs us, that he saw the parotid and subaxillary Gland, when become scirrhus, happily extirpated by a skilful Surgeon at the *Hague*; that after the Extirpation of the parotid Gland, there was no Occasion for tying the Arteries, since the Hemorrhage was easily stopt by putting in a Piece of Sponge dipt in some astringent Liquor, which spontaneously fell out on the eighth Day, whilst a Discharge of Pus appeared underneath. From these Circumstances we may learn what happy Effects may be produced by a skilful Hand, even in the most dangerous Cases.

*As for the Mobility of the Scirrhus*; Before the Extirpation of a Scirrhus is agreed upon, it ought to be evident, that it is moveable in all Directions, and not adhering to any Part; for unless it is totally removed, the smallest Portion left will most infallibly degenerate into a Cancer, as all practical Authors affirm. But every Gland is lodged in a cellular Coat, and is with it naturally moveable every Way; a Scirrhus ought, therefore, to be laid hold on with the Fingers, and moved upwards and downwards, and to the Sides in all Directions; and when it moves with equal Ease in all Directions, it is said to be moveable, and neither adheres to the subjacent nor circumambient Parts. The cellular Coat, indeed, every where adheres to the Gland, but the one may be separated from the other, without any Loss, or even without any considerable Pain, as we shall afterwards shew. It sometimes happens, that a Scirrhus can be easily enough moved downwards and to the Sides, whilst the Skin adheres to its superior Part; but this is easily known, because in that Part the Skin cannot be elevated. But a Scirrhus of this Kind may be, also, extirpated by cutting out, at the same time, that Part of the Skin to which it adheres. But in such a Case the Wound ought to be very large, and the Cicatrix will be unseemly on account of the lost Skin.

*As for the State and Condition of the Scirrhus*; Whether, for instance, the Scirrhus is single, or whether other scirrhus Tumors, if present, can be resolved, or, if Necessity calls for it, extirpated with the Knife. Thus, for instance, it would signify nothing to remove a Scirrhus from the Breast, when it is evident, from certain Signs, that the Uterus is



also scirrhus, or that there is a Scirrhus in the other Breast, which, for Reasons to be after mentioned, cannot be extirpated.

*As for the Strength and Condition of the Patient;* 'Tis certain, that all the Efforts of the Physician ought to aim at the Recovery of the Patient. Hence, if the Strength is so far destroyed, as that the Death of the Patient might be dreaded from the Pain, the Hemorrhage, or the violent Suppurations which often ensue upon the Extirpation of large Tumors, the Cure is, in such a Case, attempted in vain. The same Caution is to be observed in Cases where an excessive Cacochymy has infected the whole Mass of Blood; for in this Case Wounds can hardly ever be brought to a good Cicatrix, unless the State of the Blood could be rendered better. 'Tis certain, that if there is a Suspicion that a Scirrhus will soon degenerate into a Cancer, this dubious Remedy is to be preferred to so certain and so terrible a Misfortune; and in this Case the prudent Physician ought to advise the Extirpation of the Scirrhus, though the Operation could not be performed without Danger.

When, after a mature Consideration of all Circumstances, the Extirpation of a Scirrhus is agreed upon, great Caution is necessary with respect to the Method in which it is to be done; for actual Cauterics and corrosive Applications are not to be used, unless the Scirrhus is so small, that it may, by these means, be destroyed all at once; and even, in this Case, it is more safely extirpated by the Knife, since, if the smallest Portion is left, a Cancer is to be dreaded. If a scirrhus Tumor, which rarely happens, should be totally prominent beyond the Surface of the adjacent Parts, to which it is only fixed by a Kind of Foot-stalk, some have advised the tight Application of a Ligature about this Stalk, so that all Nourishment being by this means intercepted, the Scirrhus may die away and fall off. But this Method is not to be used, unless the Surgeon is certain, that nothing of the Scirrhus is thus divided by the Ligature; for the Part left, though the far greater Part were already fallen off, would degenerate into a Cancer. The celebrated *Boerhaave* had an Opportunity of observing a memorable and fatal Instance of this, whilst some Persons thus attempted the Cure of a large scirrhus Tumor, with a small Neck situated on the Back, though they were sufficiently advised, that their Measures might be productive of the worst of Consequences: For by means of two Brass Laminæ, prepared on purpose in such a manner as to become gradually tighter by Screws, they endeavoured to compress the Root of this Tumor, but the Event was fatal; for not only the Scirrhus, but also the adjacent Parts, were seized with an excessive Putrefaction, and diffused so fetid and disagreeable a Smell, that the Patient being deserted by every Body, and by his Surgeons, fell a miserable Victim to the preposterous Measures which had been taken with him.

It, therefore, seems most proper to remove a Scirrhus by the Knife, with all Expedition, when there is no hope of a Resolution; for a Scirrhus when left long, is ready to increase in Bulk, adhere to the adjacent Parts, or propagate itself to the neighbouring Glands. A Scirrhus may be extirpated in two manners; for after making an Incision in the Integuments, the entire Scirrhus may be taken out; or the Scirrhus together with the Integuments may be cut out at one and the same Time. The former Method is safer, though more slowly performed, and is to be used in removing small scirrhus Tumors, no where adhering to the Skin, but remaining every where free in the *Membrana Cellulosa*. But when the Scirrhus is large, and adhering to the Skin, the latter Method is to be used; when, for instance, the whole of the Breast being scirrhus, is to be extirpated. In order to take out a Scirrhus in the former manner, the Surgeon stretching the Integuments, is to make an Incision through the Skin and *Membrana adiposa*, to the Scirrhus, without wounding it. This Incision must be varied according to the Bulk of the Scirrhus: Thus, if the Tumor is but small, a strait Incision is sufficient; but if it is large, a crucial Incision is requisite. Then by small Hooks elevating the Corners of the divided Integuments, they are, by a Knife, to be separated from the Scirrhus, till the whole anterior Part of it is exposed to View; then thrusting the Forceps of *Helvetius* into the Body of the Scirrhus, it is to be gently drawn upwards, that it may be the more commodiously separated by the Knife, and taken out. When a scirrhus Gland is lodged in the *Membrana Adiposa*, this Separation may be made without any great Pain, except in that Part where the Vessels enter the Scirrhus. Having removed the Scirrhus, and stopt the Hemorrhage, we are to examine whether any Thing of a scirrhus Nature is left behind; then we are to proceed in the Cure, in the same manner as in the Cure of other Wounds, accompanied with Loss of Substance. See the Article *VULNUS*. The Extirpation of such a Scirrhus, together with all the Cautions necessary to be observed on such an Occasion, are

exactly described in the before-cited Dissertation wrote by *Abraham Kau*, who saw the Operation happily performed by a skilful Surgeon. In that Dissertation, the Author justly advises, that the Scirrhus should not be imprudently drawn in the Separation: For when the Nerves distributed to the Scirrhus are stretched, and rendered tense, a violent Pain is not only excited, but, also, mortal Convulsions have followed, sometimes long after the Operation. We are, also, to take care not to irritate the Surface of the Wound by acrid Styptics; nor are we to use such Things as violently coagulate the Blood: For the concentered Clots of Blood lodg'd in the divided Veins, may, through Ramifications which continually become larger, be conveyed to the Heart and Lungs; and lay a Foundation for Polypules. Lint applied by a proper Bandage, is generally sufficient; Puff-Ball is, also, of singular Use in stopping the Hemorrhage.

But when the Scirrhus is taken away, together with the incumbent Integuments, as in the Extirpation of a Breast, it is requisite there should be an Incision made under the Scirrhus, through the *Tunica adiposa*, without hurting the subjacent Parts: In order to this, the Scirrhus is to be elevated from the subjacent Parts, either with the Hands of the Surgeon only, or by passing proper Needles through it, or by thrusting the Forceps of *Helvetius* into the Substance of the Scirrhus; or passing a kind of Fork through the *Membrana cellulosa* between the Scirrhus and subjacent Parts, the Extirpation is to be performed by a Knife, which passing along close under the Fork, divides all the Parts, and goes through the *Membrana adiposa*. During the Operation, the Scirrhus is to be elevated by raising the Fork, by which means the Knife is hindered from injuring the subjacent Parts. But different Methods of Extirpation are chosen by Surgeons, according to the Bulk of the Scirrhus, and the Nature of the Part in which it is lodged. But the Extirpation of such a Scirrhus cannot be made without leaving a large Wound. Hence there is always Danger, lest the Patient should either be exhausted by too copious a Suppuration, or that the Pus collected in so large a Wound, being resorb'd by the bibulous Veins, should contaminate the Mass of Blood with a purulent Cacochymy. Hence the former Method of extirpating a Scirrhus is safer, since it is never succeeded by so violent a Suppuration, and the Wound is much sooner cured. The Surgeon ought, also, to have intrepid and skilful Assistants, in order to compress the divided Arteries, lest the Blood discharged should incommode the Operator.

If a Scirrhus is old, or known to be malignant from its Colour, Hardness, Roughness, Itching, and beginning Pain; if a bad Event is to be dreaded from the Part affected, or those adjacent; if the Scirrhus adheres to any Parts; if it happens in a cacochymical Person, or cannot possibly be extirpated. Then all those Things are to be avoided which increase the Motion of the Fluids, lest the Scirrhus should become a Cancer. Hence Medicines of an emollient, suppurant, corrosive, caustic and dissipating Nature are bad.

Having already considered the Measures to be taken for the Resolution and the Extirpation of a Scirrhus, we now come to enquire what ought to be done when there are no Hopes of a Resolution, and no Possibility of an Extirpation. The Impossibility of a Resolution is known from the long standing of the Scirrhus; from a Change of the natural Colour of the Integuments to a red, purple, or livid Colour; from a stony Hardness, accompanied with a rough and uneven Surface of the Tumor. But if to all these an Itching is added, it is greatly to be dreaded, that the Scirrhus will soon degenerate into a Cancer; for then the Scirrhus begins to be put into a kind of Commotion, and the Nerves distributed through it are gently distended. Hence arise so keen a Titillation and Itching, that the Patients, tho' told that a Cancer will be formed, if they scratch it, cannot yet abstain from doing so. And if a Pain soon succeeds the Itching, the Disorder is still more terrible. The Extirpation of a Scirrhus is known to be impossible, if it has so grown to the adjacent Parts, that it cannot be totally extirpated; when it is situated in a Place to which the Hands of the Surgeon cannot have Access; or when the Largeness of the adjacent Blood Vessels render the Operation too dangerous. But in this last Case, a great deal is to be expected from the skill and Dexterity of the Surgeon. But if a malignant Cacochymy has so infected the Mass of Blood, that the Consolidation of the Wound made in the Extirpation of the Scirrhus, can hardly be expected; or if several scirrhus Tumours appear in other Parts of the Body, 'tis sufficiently obvious, that, in such Cases, the Operation must be vain and to no purpose. Since therefore, in such a Case, the Disorder can neither be corrected nor removed, the whole that Art can do, is to retain it in the same State, and prevent its Degenerat-



ing into a more terrible Misfortune. This is that Case concerning which *Hippocrates* affirmed, that it was most expedient not to attempt to cure those labouring under occult Cancers; because those who are thus treated die soon after: Whereas those whose Cures are not attempted, live longer; for a Scirrhus, accompanied with the Symptoms just now enumerated, may be justly called an occult Cancer. It is to be observed, that an irresoluble Scirrhus very soon degenerates into a Cancer, if the Motion of the Humors is increased either in the whole Body, or in the Part affected, as we have already observed: All such Remedies, therefore, as increase the Motion of the Humors, are hurtful, under whatever specious Names they may be recommended; for in this Case a Suppuration can never happen, by means of which the irresoluble scirrhus Concretion may be separated from the sound Parts; but a malignant and unfurmountable Putrefaction, which preys upon all the adjacent Parts, will ensue, as is observed under the Article CARCINOMA. So long as a Scirrhus, degenerating into a Cancer, is contained within its own Integuments, it is tolerable; but when, after a Rupture of the Integuments, an exulcerated Cancer is produced, it rages with unfurmountable Fury; all emollient and suppurating Medicines, therefore, by lessening the Cohesion of the Integuments, accelerate and hasten this Misfortune. But corrosive and caustic Medicines prove injurious, far sooner and in a far more terrible Manner. *Hildanus, in Observ. Chirurg. Cent. 1. Observ. 89.* has, by his Observations, demonstrated, how pernicious emollient Substances are, when applied to inveterate scirrhus Tumors. And, says Dr. *Van Swieten*, I myself have often seen foolish Women, when endeavouring to bring scirrhus Tumors in their Breasts to a Suppuration, have soon converted them into exulcerated Cancers, by the Application of such Medicines. *Ettmüller, in Oper. Med. Tom. 2. Part 2.* orders an incurable Scirrhus to be left entirely untouched, or to be converted into a stony Hardness, by the Application of Nitre dissolved in Vinegar. But this seems to be a dangerous Piece of Practice, since the increased Bulk of the Tumor denotes its greater Malignity; for it would be irritated by these acid Substances, and especially if the Scirrhus is already troublesome by the Punctures with which it is accompanied; if it is painful when touched, or of a livid Colour; to a Scirrhus of which Kind, he orders the Application of this Remedy. It is, therefore, better to hinder the Scirrhus from degenerating into a worse State, by such Things as prevent an Inflammation, or allay it when formed; since the Obstinacy of this Disorder surpasses the Power of any Art hitherto known.

But the most proper Medicines under this Disorder, are Anodynes; such Substances as allay the Motion of the Humours; Preparations of Lead, and mild Preparations of Mercury.

The Food ought to consist of recent Milk, Butter-Milk and Whey; Broths prepared of the fresh Fleshes of Quadrupeds and Fowls; Preparations of frumentaceous Substances, such as Oats, Barley, Millet, Canary-Grass, Rye, Wheat, the Pot-Herbs enumerated under the Article FENUGRA, mild mature Summer-Fruits, which are partly acid and partly sweet; especially boiled. The Drink ought to be Decoctions of the Roots of China, Sarsaparilla, and the three Species of Sanders. All violent Passions of the Mind ought, also, to be carefully avoided, or, when excited, prudently soothed and removed. All acid heating Substances, or such as throw the Humours into a Commotion, are in this Case highly injurious. If lancinating Pains, and an uneasy Itching, are perceived in the scirrhus Part, these Symptoms are to be allayed by Anodynes, both internally used and externally applied. Thus:

Take of White Poppy-Seeds bruised, two Ounces; of the Roots of Fennel, four Ounces; of Wild Poppy-Flowers, six Drams; and of the Flowers of Mallows, one Handful. Boil in Water in a close Vessel for a Quarter of an Hour; and with each two Pints mix two Ounces and an half of the Syrup of White Poppys. Of this Preparation let the Patient now and then drink three or four Ounces.

Take of Sperma-Ceti, prepared Red Coral, and unwashed diaphoretic Antimony, each one Dram; and of pure Laudanum, two Grains; Reduce to a fine Powder, to be divided into four equal Doses; of which the Patient is to take one every Morning and Evening.

External Medicines are also of Use, and an excellent Fomentation may be prepared in the following manner.

Take of the Flowers of Henbane, Melilot, Red Poppy and Elder, each one Pugil. Boil with Water in a close Vessel; and with each Pint and an half of the Liquor, mix Vinegar of Elder and Roses, each two Ounces; and of the rectified Spirit of Wine, four Drams.

Take of the Vinegar of Litharge, one Ounce; of the expressed Oil of Henbane Seeds, of the expressed Oil of White Poppy, and of the Oil of Roses by Infusion, each two Drams: Make into an Ointment, adding towards the End six Grains of pure Opium.

For Plaisters we may use the Red-Lead Plaister, and the Unguentum Diapompholygos: Or,

Take of the expressed and recent Juice of the Leaves of Henbane, Garden-Poppy, and Phellandrium, each four Ounces: Boil over a gentle Fire, inspissate; and towards the End, mix eight Ounces of White-Wax, and one Ounce of the Oil of Roses by Infusion: Mix into a Plaister. Or,

Take of the Sugar of Lead, Cerufs, an Amalgama of Mercury and Lead, each two Drams; of White-Wax, four Ounces; and of the Oil of Roses, by Infusion, three Drams: Make into a Plaister.

But if the Integuments of the Scirrhus begin to be inflamed, we are, by prudently applying Preparations of Lead, to endeavour to check that Inflammation. The most considerable Medicines of this Kind are Vinegar of Litharge, diluted in a large Quantity of Water; the Unguentum Nutritum, prepared of this Vinegar, and the Oil of Night-shade intimately mixed, and the Emplastrum Diapompholygos. These Medicines, also, allay the Itching. The scirrhus Part is to be carefully covered with a Piece of soft Leather, in order to prevent all Attrition of the Cloaths, by which the Integuments might be easily excoriated. Hence Women who have scirrhus Breasts, should never wear Whale-bone Stays, nor use hard Exercise; since, in that Case, the Scirrhus would be agitated by the subjacent pectoral Muscle. Mild mercurial Preparations are in this Case of great Use. An Amalgama of Quicksilver and Lead, mixed with the Emplastrum Diapompholygos, has sometimes proved highly beneficial in Cases where the Integuments of the Scirrhus have already been beginning to be inflamed. Others recommend a thin Plate of Lead, besmeared with Quicksilver, and adapted to the Figure of the Scirrhus. But when Mercurials are applied to a Scirrhus, we ought to be very cautious, least, by an unskilful Use of them, a Salivation should be excited, which, in this Case, will always prove hurtful, since it cannot resolve the scirrhus Concretion; whilst at the same time it increases the Motion and Acrimony of the Humors, and consequently promotes the Degeneration of the Scirrhus into a Cancer.

If at the same time the Temperament of the Patient is peccant, that is above all other Things to be corrected.

Since the whole Intention of this palliative Cure is to prevent the greater Bulk of the Scirrhus, and hinder it from degenerating into a Cancer, it is sufficiently obvious that the morbid Temperament of the Patient, if he has such, ought to be corrected. We have already observed, that an atrabiliarious Habit, of all others, lays the greatest Foundation for scirrhus Tumors: If, therefore, such a Temperament is present, it will increase a present Scirrhus; for which reason the Diet and Aliments ought to be such as are proper for correcting this Temperament. For this purpose, the Patient is to use such Things, as, by mild and saponaceous Quality, subvert the atrabiliarious Juice. On the contrary, all Substances possessed of any considerable Acrimony are to be carefully abstained from. Honey, Venice-Soap, the mild but strongly resolvent Juices of Herbs, are of singular Service; as also proper Decoctions, such as those prepared of Succory, Goats Rue, Endive, Fumitory, and some others. If, in like manner, the Patient was afflicted with a violent Scurvy, that Disorder is, in like manner, to be removed, or at least mitigated by proper Medicines; because acid Juices, mixed with the Scirrhus, increase its Malignity, and soon change it into a Cancer. *Van Swieten.*

When a Scirrhus appears to be inveterate, and the Patient is of an infirm Constitution, no Digestion must be attempted; for this Treatment, especially if the Disorder is seated in the Breasts of Women, may easily make the Scirrhus degenerate into a Cancer. But where the Scirrhus is recent, soft, and attended with little Pain, and the Constitution of the Patient is sound, it may not be improper to undertake



dertake its Discussion by the Use of Digestives both internally and externally. The most efficacious internal Medicines are the Decoctions of the Woods, the digestive Essences and Tinctures, with the milder Mercurials, interposing Laxatives for resolving the thick inspissated Humours. As the Use of external Medicines alone are generally more pernicious than beneficial, a skilful Physician ought always to be consulted, not only to prescribe proper internal Medicines, but likewise a necessary Regimen with regard to Diet.

The principal external Resolvents are Plaisters of the Gummi Ammoniacum, Galbanum, Opopanax, Sagapenum, Bdelium, and the like, either separately or mixed; or the Powder of the Roots of Briony and Birth-wort, may be added to them. Of the same Intention are the Emplastra de Cicuta, de Ranis Vigonis, and of Diachylon, with Mercury. Or the following:

Take of the Gums Galbanum and Opopanax, each an Ounce; Ammoniacum and Bdelium, each two Ounces; Olive-Oil, two Pounds; yellow Wax, half a Pound; Powders of the Root of long and round Birth-wort, Lapis Calaminaris, Myrrh, and Frankincense, each an Ounce; Venice Turpentine, four Ounces: Mix them for a Plaister.

Cataplasms may be reckoned the next efficacious Remedies to Plaisters. Thus:

Take of the Roots of white Briony, four Ounces; Roots of round Birth-wort, and Angelica, one Ounce; of the Herbs, Savine, Rue, Scordium, and of Camomile-Flowers, each a Handful; of the Flowers of Melilot, Elder, Mallows, and Lesser Centaury, each a Handful: Boil them in clean Water, and a close Vessel, to the Consistence of a Cataplasm; adding at the End, of Galbanum dissolved in the Yolk of an Egg, three Ounces; Linseed Meal, two Ounces; Linseed Oil, enough to make the whole into a Cataplasm.

This Cataplasm, or a Fomentation made of the same Herbs, boiled in Vinegar, may be applied warm, not forgetting the Use of internal Medicines.

Some greatly recommend Fumigations of Acids, as Digestives in this Case, using boiling Vinegar, either common or that made of Lavender, Elder, Rue, or Treacle, for several Days. Some sprinkle the Vinegar on an ignited Stone, and receive the Steam through a Funnel. Others expose the Part affected to the Vapour of burning Sulphur; but the strongest Remedy used of this Kind, is the Fume arising from ten to twenty Grains of Cinnabar thrown upon live Coals, or an ignited Stone. But particular Care must be taken, that these Fumigations be not too strong, nor too frequently used; for by being drawn into the Lungs, they may produce dangerous Effects; and as the Cinnabar contains Mercury, it may raise a Salivation.

Mercurial Remedies are excellent in this Case, either when applied immediately, or after other Medicines have proved unsuccessful. Besides the internal Use of Mercury, an excellent Ointment may be prepared, by mixing it with Hog's Lard, and a sufficient Quantity of Turpentine, in a Glass or Marble Mortar. With this anoint the Scirrhus twice or thrice a Day, and apply the *Emplastrum Vigonis* with Mercury, or the like. But in order to prevent a Salivation from being raised by this Method, 'twill be necessary to exhibit every fourth or fifth Day a gentle Purge, as the Powder of Jalap, or the laxative Pills, for carrying off the Mercury. Mean while the Fauces should be carefully inspected, which, when they swell or are painful, threaten a Salivation. But in order to prevent it, more frequent Purging is necessary; and the mercurial Remedies must be omitted till the Symptoms of a Salivation vanish. By observing these Cautions, you need not doubt the Patient's Recovery, unless the Case be already desperate.

If all these Remedies prove ineffectual to disperse the Scirrhus; and if it is safely situated and moveable, and the Strength of the Patient will permit the Operation, it will be proper to extirpate the Scirrhus, lest, as often happens, it should degenerate into a Cancer. The Wound may be healed with *Arcæus's*, or any other vulnerary Balsam, as in other Wounds.

But when the Scirrhus is immoveable, unequal and deeply seated; when the Constitution of the Patient is infirm; when the Disorder proceeds from an hereditary Infection, and several are generated in the same Person; when it is seated in some noble Part, and from its Vicinity to the larger Blood-Vessels, an Hemorrhage may prove fatal, then the Use of the Digestives, of the Knife, or of Corrosives is evidently improper. This Sort of Scirrhus almost always degenerates into

a Cancer, or is, at least, attended with very acute Pains. Here, therefore, the Pains are to be removed, and the Cancer, at least, prevented.

In this Case the Blood must not only be corrected by suitable external and internal Medicines, but a proper Regimen of Diet must be observed. Let the Patient, therefore, be nourished with various kinds of Broth, made of the Flesh of young and tender Animals, with some mild Pot-Herbs, such as Barley, Oats, Rice, Millet, Manna, the softer Pulses, Spinache, Asparagus, Viper's Grass, Goat's Beard, Succory, Parsneps, and fresh Hops. The most wholesome common Drink is either fair Water, or a Ptisan made of the China Root, Sarsaparilla, Grass, Polypody, Veronica, Hart's Tongue, Agrimony, Saracen's Confound, Pellitory of the Wall, Maiden Hair, and the like. If the Scirrhus be attended with Pain, add to the Patient's Drink a little of the Seed of white Poppy, which may be sweetned to the Patient's Taste. In order to correct the Acrimony of the Blood, exhibit the Powder of Crabs-Eyes, prepared Shells, Salt of Wormwood, native Cinnabar, crude Antimony, and diaphoretic Antimony, mixing with every Dose, to alleviate the Pain, half a Grain of Laudanum Opiatum, once, twice, or thrice a Day, according to the Circumstances of the Patient. What, also, excellently answer this Intention, are, the recent Powder or Juice of Millepedes, a Dram of Sperma Ceti, given with the other Powders; mercurial Purges, either in Pills or Powders; and, lastly, frequent Bleeding and Purging in Spring and Autumn.

Outwardly apply, constantly, a thin leaden Plate well impregnated with Quicksilver; which will not only mitigate the Heat and Pain, but may avert the Danger of a Cancer. If this leaden Plate is not effectual for this Purpose, apply Plaisters and Ointments, composed of Ingredients proper for assuaging Pain; such as the following.

Take of Unguentum Diapompholygos, two Ounces; Opium, ten Grains; mix them together, and therewith frequently anoint the Part affected; and, also, apply it with a Linnen Cloth. Or,

Take of amalgamated Mercury and Lead, one Ounce; Ointment of Roses, a sufficient Quantity; make them into an Ointment, which apply to the Part with a Linnen Cloth, like a Plaister. Or,

Take of the Vinegar of Litharge, one Ounce; the expressed Oils of Henbane, and white Poppies, each two Ounces; the infused Oil of Roses, two Ounces; mix and make them into an Ointment, to which, at the End, add from six to ten Grains of Opium, which spread upon a Linnen Cloth, and apply to the Scirrhus several Times a Day.

If the Patient dislikes these Ointments, refrigerant Plaisters may be applied; such as the leaden Plaister of *Alyssum*, the Plaister of red Lead, and of Diapompholygos; or the following Composition, which is excellent for alleviating Pain.

Take of the recent, expressed and purified Juice of Henbane Leaves, Garden Poppy, and Water Hemlock, each four Ounces; inspissate them by boiling over a slow Fire; and at the End add, of white Wax, eight Ounces; of the infused Oil of Roses, one Ounce; make them into a Plaister. Or,

Take of Sugar of Lead, Cerus, amalgamated Mercury and Lead, expressed Oil of Henbane, and infused Oil of Roses, each two Ounces; White Wax, four Ounces; mix and make them into a Plaister.

If the Pains are very violent, add to these a little Opium.

Some eminent Physicians, in the Cure of a Scirrhus, bring it to Suppuration, or use corrosive Medicines, or the actual Caution. But as Suppuration and Corrosives endanger a Cancer, and as People have a natural Abhorrence to the actual Caution, besides many other Inconveniencies which attend these Methods, they ought to be laid aside as slow, hazardous and cruel. The easiest and readiest Method, therefore, of curing a large and painful Scirrhus, whether it be in the Lips, Salival Glands, or Breasts, or Testicles, is to remove it entirely by Incision, unless much Danger may be feared from the Hemorrhage. But if any of the corrupted Part should be left behind, it will be liable to generate a Cancer of a most malignant Nature; and although the Scirrhus should be entirely extirpated, a new one will frequently arise, without any Fault of the Surgeon. Some Physicians, after the Incision, apply the actual Caution, in order to stop the



Hemorrhage, to entirely extirpate the Scirrhus, and prevent its Return. But this Application appears to me unnecessary, as it contributes little to prevent a new Scirrhus, and as there are many milder and more proper Remedies for stopping the Effusion of Blood.

SCIURUS. The Squirrel. The Fat of this Animal is said to be emollient, and to mitigate Pains of the Ears, if put therein.

#### SCLAREA.

The Characters are;

The small Leaves under the Whorls are of a different Shape from the rest; the under Leaves are wrinkled, and of a rarer Texture. The Calyx is tubulous, quinquefid, and as it were bilabiated. The Galea is falcated, long, crooked; the Beard tripartite, the middle Segment bifid and hollow. The Flowers surround the Joints of the Stalks in circular Order, and are generally six in number, and disposed, as it were, in form of a Spike. The Seeds are roundish.

Boerhaave mentions twenty-nine Sorts of *Sclarea*, which are;

1. *Sclarea*, *Tourn. Inst.* 179. *Boerb. Ind. A.* 163. *Horminum*, *Sclarea*, *Offic.* *Horminum sativum vulgare, sive Sclarea*, *Park. Theat.* 55. *Horminum Sclarea dictum*, *C. B. P.* 234. *Raii Hist.* 1. 543. *Gallitrichum*, *Ger.* 668. *Gallitrichum sativum*, *J. B.* 3. 309. *Gallitrichum sive Horminum*, *Ger. Emac.* 768. CLARY.

The lower Leaves of Clary are large, rough, rugged, and wrinkled, broad at Bottom, and ending in a blunt Point: The Stalks are about two Foot high, very hairy and clammy, of a strong Scent as well as the Leaves, growing thick together, and clothed with smaller Leaves: The Flowers stand in large Spikes, of a pale blue Colour, pretty big and large, bending hollow Galea's: They are set on *Verticillatum*, or Whorle fashioned, having two round, hollow, thin, whitish Leaves, with a green Border under each Whorle. The Calyx of the Flower, which is very clammy, is divided into two Parts, the upper ending in three, and the lower in two Spinulæ, containing four round blackish Seed. The Root is woody, and not much branched, and perishes after it has born Seed. It grows in Gardens, and flowers in *June* and *July*. The Leaves are used.

Clary is accounted to be of a warming and drying Nature. Infused in Wine, it comforts a cold, windy Stomach: It is particularly commended to strengthen the Kidneys, to help a Fluor Albus, and invigorate a cold relaxed Womb. *Müller's Bot. Off.*

2. *Sclarea*; flore albo.

3. *Sclarea*; *Syriaca*; flore albo. *T.* 179. *Horminum Syriacum*, *C. B. P.* 238. *Prodr.* 114.

4. *Sclarea*; *Orientalis*; folio rotundo; flore magno; partim albo, partim purpurascens. *T. Cor.* 10.

5. *Sclarea*; *Lusitanica*; glutinosa; amplissimo folio. *T.* 179.

6. *Sclarea*; vulgaris; lanuginosa; amplissimo folio. See *ÆTHIOPIS*.

7. *Sclarea*; laciniatis; foliis. *T.* 179. *Æthiopis*, *laciniatis foliis*. *Barrel. Ic.* 188.

8. *Sclarea*; sicula; folio argenteo, subrotundo. *Æthiopis*, *ita, argentea; perennis lanuginosa*. *Cupani.*

9. *Sclarea*; *Æthiopica*; folio subrotundo; perennis. *Ind.* 63. *Marum Ægyptiorum*. *Alpin. Exor.* 252.

There grows in the dry and rugged Parts of *Egypt*, a Kind of sweet-scented Plant, which runs up in one whitish jointed Stalk, to the Height of a Cubit, or more: On each Side of the Joints stands a long thick Leaf, very like that of the *Horminum sylvestre*, both in Size and Shape, without Smell, and almost without Taste, but drying, with somewhat of Astringency. These Leaves are covered with a white Down, and proceed from the Joints in opposite Order in the lower Part of the Stalk. In the upper Part, or above the Middle of the Stalk, there proceed from the Joints, together with the Leaves, short, slender, square, Branches; from these Joints on each Side are produced white Flowers, very much resembling those of the *Sclarea*, or *Herba Sancti Johannis*; and having, as well as their small Leaves, a very strong, though not unpleasant Smell: These are succeeded by small Seed-Vessels, containing round, minute Seeds, like Cabbage-Seed; and of a penetrating Smell. All the young Shoots of the Stalk, with the Leaves, Flower, and tender Branches, are very fragrant; and being dry'd in the Shade, serve to put among Clothes to defend them from Moths, and communicate to them its Fragrance; for the tender Branches being dry'd, change their strong Smell into one more pleasant.

The Flowers and Seeds are heating, digestive and resolvent. A Decoction of the Leaves, and especially the tender Shoots, in Wine, is good for cold and flatulent Pains, and being apply'd to the griev'd Part, are surprizingly effectual. The

Juice of the Leaves, with Vinegar and Honey, are good to remove Pains from the Face. *Prosper Alpinus de Plantis exoticis.*

10. *Sclarea*; *Indica*; floribus variegatis. *T.* 179. *Horminum hirsutum, flore violaceo, punctis aureis notato*. *M. H.* 3. *Secl.* 11. *Tab.* 13. *Fig.* 16.

11. *Sclarea*; folio triangulari, dentato. *T.* 180. *Horminum, Lapatii unctuosum folio, seu majus, hastato folio*. *M. H.* 3. *Blæf.*

12. *Sclarea*; folio triangulari; caule tomentoso. *T.* 180. *Horminum Canariense, tomentosum, hamato folio*. *M. H.* 3. 394.

13. *Sclarea*; rugoso; verrucoso; laciniato, folio. *T.* 180. *Horminum, ceratophyllum; rugosum, flore sulphureo*. *M. H.* 3. 393.

14. *Sclarea*; *Pyrenaica*; glutinosa; foliis sinuatis. *T.* 176. *Horminum anguriae folio*. *Par. Bat.*

15. *Sclarea*; glutinosa; floris lutei, variegati, Barbâ amplâ cavâ. *Horminum luteum; glutinosum*. *C. B. P.* 238. *Orvala tertiâ*. *Dod. p.* 292. *Colus Jovis*. *H. Eyft. Ælt.* 6. 8. *F.* 4. *Fig.* 1. *Galeopsis Species, lutea, viscida odorata, nemorensis*. *J. B.* 3. 314. *Salvia, montana, maxima, foliis Hormini, flore flavescens*. *T.* 180.

16. *Sclarea*; *Asphodeli radice*. *T.* 179. *Horminum, sanguineum, Asphodeli radice*. *Triumf.* 69. *M. H.* 3. 394.

17. *Sclarea*; folio amplissimo, sanguineo, *Bardanae*. *Horminum, folio Bardanae, sanguineo, amplissimo*. *Triumf.*

18. *Sclarea*; major; foliis in profundas lacinias incis. *T.* 179. *Horminum, sylvestre, majus, foliis profundè incis.* *C. B. P.* 239. *Gallitrichum, sylvestre, flore majore, albo*, *I. B.* 3. 312.

19. *Sclarea*; *pratensis*; foliis ferratis; flore albo. *T.* 179. *Gallitrichum, sylvestre, flore majore, albo*. *I. B.* 3. 312. *Salvia, agrestis, flore albo*. *H. Eyft. Vern.* 6. 9. *F.* 2. *Fig.* 3. *Horminum, pratense, niveum, foliis incanis*. *C. B. P.* 238. *M. H.* 3. 393.

20. *Sclarea*; *pratensis*; foliis ferratis; flore cæruleo. *T.* 179. *Horminum, pratense, foliis ferratis*. *C. B. P.* 238. *M. H.* 3. 393. *Gallitrichum sylvestris vulgò, sive sylvestris Sclarea, flore cæruleo, magno*. *J. B.* 3. 311. *Orvalæ Sylvestris Species quarta*. *Dod. p.* 293.

*Cæsalpinus* had not well observed the Smell of this Plant, for instead of none at all, as he affirms, it has a bad one. It seems to contain a volatile oily Salt, wherein the urinous Spirit predominates, so that it gives no Tincture of red to the blue Paper. *Martyn's Tournefort.*

21. *Sclarea*; *pratensis*; foliis ferratis; flore suaverubente. *Tourn. Inst.* 179. *Boerb. Ind. A.* 165. *Sclarea pratensis*, *Offic.* *Horminum pratense foliis ferratis, flore suaverubente*. *Hort. Reg. Par.* *Gallitrichum sylvestre vulgò, sive sylvestris Sclarea flore purpureo magno*. *J. B.* 3. 311. MEADOW CLARY.

It grows in the Meadows, and is no more than a Variety of the *Horminum pratense foliis ferratis*, according to *C. B. P.* 11. 244. *Buxb.* 161.

22. *Sclarea*; *Africana*; amplissimo folio; annua. *Ind.* 64.

23. *Sclarea*; folio *Salviæ*; major; vel maculata. *T.* 180. *Horminum sylvestre, salvisolium, majus, vel maculatum*. *C. B. P.* 239.

24. *Sclarea*; folio *Salviæ*; minor; sive glabro. *T.* 180. *Horminum sylvestre sive salvisolium minus*. *C. B. P.* 239. *Gallitrichum glabrum, folio Salviæ, flore purpureo*. *J. B.* 3. 312.

25. *Sclarea*; folio *Salviæ*; flore purpureo. *T.* 180. *Horminum, salviæ folio*.

26. *Sclarea*; *Orientalis*; folio *Betonicæ* acutissimo; comâ purpurascens. *T. Cor.* 10.

27. *Sclarea*; *Cretica*; latifolio; flore vario.

28. *Sclarea*; quod *Horminum*; sylvestre; flore rubicundissimo, interdum flammeo. *Bocc.*

29. *Sclarea*; *Orientalis*; foliis rotundioribus, candidissimis. *T.* 6. 10. *Boerb. Ind. Alt. Plant. Vol.* 1.

The Juice of the first, second, third, and fourth, and of the twenty-second, called *Africana*, being drank will cause Ebriety; it also resists Acidity, and is for that Reason mixed in Beer, to which, besides, it communicates a vinous Quality, for which it is esteem'd by the *Dutch* Peasants, who love Beer that will make them soon drunk. It is, also, of Use in Surgery, for it is discentient, and removes Tumors, restores Heat, and resists Putrefaction. But it is to be used with Caution, if fermented, in which Circumstance it is sudorific. The Leaves of this Plant, especially of the first and second Species, and in some measure of the third and fourth, being sinelled to for a considerable Time, will procure Ebriety; and the Leaves boiled in Beer, qualify it for rendering Persons soon drunk; but, used with Moderation, they comfort the Spirits and Nerves. The Plant is aperient, antihysteric, and proper in difficult Labours, and Obstructions.



# S C L

of the Menfes, and is very good also for the Fluor Albus, and a great Provocative to Venery. The Leaves bruised emit fo strong and vinous a Smell, that it is commonly us'd instead of burnt Wine in Liqueur intended for Fomentations; for it communicates a heating Quality, and produces Spirits. The Plant is well known to the Cooks. The Leaves bruised, resolve cold Tumors, and expel Sweats. *Hist. Plant. ascript. Boerhaave.*

**SCLERIA**, σκληρία, from σκληρός, hard, Hardness, in a general Sense, comprehends all Kinds of Hardnesses, in the same Extent as σκληρώσις, *Sclerosis*; but is used by *Galen*, or whoever was the Author of the *Medicus*, to signify a Hardness of the interior Parts of the Eyelids. *Castellus.*

**SCLERIASIS**, σκληρίασις. The same with the preceding Word.

**SCLEROCOITIA**, σκληροκοϊτία, from σκληρός, hard, and κοίτη, a Bed. Lying on a hard Bed, hard Lodging. Thus *Hippocrates*, *Lib. de Salubr. Dieta*, advises those who are of a fat and gross Habit of Body, and are desirous to become lean, among other Parts of Regimen, σκληροκοϊτίαν, “to lodge hard;” and those who practise it, are called, *Lib. 3. de Dieta*, σκληροκοϊταί, *Sclerocoitiae*.

**SCLEROMA**, σκληρώμα, from σκληρός, of σκληρός, hard, in the *Definitiones Medicæ*, is a somewhat hard Tumor arising in some Part of the Uterus. In a more general Sense, it is the same as σκληρυσμα, *Sclerysma*, a hard Tumor. *Fæsius Castellus.*

A *Scleroma* of the Uterus is a Species of *Scirrhus*, seated principally in the Neck of the Uterus, and resembling a Tumor, but less renitent, and attended with a moderate Pain. *P. Ægineta*, *lib. 3. cap. 68.* The Cure is the same as that of a *Scirrhus* of the same Part. See **UTERUS** and **SCIRRHUS**.

**SCLEROPHTHALMIA**, σκληροφθαλμία, from σκληρός, hard, and ὀφθαλμός, an Eye. A Sclerophthalmia, or hard Lippitude, is a Disease of the Eye, attended not only with a Hardness and Slowness of Motion, but with a Pain and Redness. The Eyelids, in this Affection, are hard and dry, never effusing any Moisture, with small, writhed, dryish, mucous Concretions in their Corners, and a Difficulty of opening or Inversion, after Sleep, on account of their Dryness. This Disease seems to be a Kind of Inflammation, whose general Characters are a Pain and Redness, but it differs from an Inflammation in a Property peculiar to itself, which is Dryness. It differs also from a *Xerophthalmia*, or dry Lippitude, in that this latter, though necessarily hard on account of its Dryness, is, however, much less hard than a *Sclerophthalmia*, and not so painful.

**SCLEROSARCOMA**, σκληροσάρκωμα, from σκληρός, hard, and σάρκωμα, a *Sarcoma*, a hard, carnosous Abscess, affecting the Gums, and resembling sometimes a Cock's Comb, sometimes the Flesh of a testaceous Animal. *Castellus.*

**SCLEROSIS**, σκληρώσις, is the same as **SCLERIA**, which see.

**SCLEROTICA Tunica**, one of the Coats of the Eye, which see described under **OCULUS**.

**SCLEROSIS**, **SCLEROMA**, **SCLIRUS**, or **SCLERUS**, all import the same as **SCIRRHUS**.

**SCLOPETUM**. A Gun. For the Preparation of the *Aqua Sclopetaria*, see **AQUA**. For Gun-shot Wounds, see **VULNUS**.

**SCOB**. The rasped Powder of Hartshorn, or Ivory. It also imports the same as *Cinere Clavellati*; or the Scorix of Metals. *Castellus.*

**SCODEGHINO**. The Name of a particular Sort of Incision-knife, described by *Scultetus*, and us'd by *Rouffet* in performing the Cæsarean Operation.

**SCODINEMA**, σκοδινημα. This Word is explained by *Eratian*, a Heaviness of the Head.

**SCOLECIA AERUGO**. See **AERUGO**.

**SCOLECIUM**. A Species of venomous Spider. See **PHALANGIUM**.

**SCOLECOIDES**, σκοληκοειδής. The same as **VERMIFORMIS**, an Epithet for a Worm-like Process of the **CEREBELLUM**.

**SCOLEX**, σκώληξ. A Worm.

**SCOLIOSIS**, σκολίωσις, from σκολιός, oblique, Obliquation, Perversion, a turning aside, is particularly apply'd by *Hippocrates* to a Distortion, or Perversion of the Spine sideways.

**SCOLIOTES**, σκολιότης, from σκολιός, oblique, Obliquity, in *Hippocr. de R. V. J. A.* is spoken of the Hypochondria, and explain'd by *Galen* in his Comment on the Place, by ἀσυνεπεία, Inequality.

**SCOLOPAX**. See **GALLINAGO**.

**SCOLOPENDRA**, Offic. Charlt. Exer. 57. Mouff. Insect. 199. Mer. Pin. 205. *Scolopendra terrestris*, Aldrov. de Insect. 635. Jons. de Insect. 127. **THE MANY FEET**.

# S C O

The *Scolopendra* is a flat, slender Worm, three Digits in Length, of a yellowish, or reddish Colour, furnish'd on both Sides with a Multitude of Feet, two pretty long Antennæ, and a bifid Tail. Being boiled in Wine, it is esteem'd by some a Depilatory, or Medicine to take off Hair.

The Bite of the *Scolopendra* is said to be poisonous, *Oribanús de Morb. Cruat. l. 3. c. 69.* advises to wash the injur'd Part with Brine; or to lay upon it Ashes with Vinegar.

The *Scolopendra* is a venomous Insect with eight Feet, and a forked Tail. The Bite of this Animal causes a Lividness and Tumor in the Parts about the Wound; sometimes there appears a Feculency, and, though but seldom, a Redness. The Part affected immediately begins to ulcerate, and the Ulceration is both painful, and difficult to be cured; to which we may add, that there is a pruriginous Sensation over all the Body.

For the Cure, pounded Salt is to be apply'd to the Place, or Rue bruised, or Ashes work'd with Vinegar. The Wound is also to be washed with strong Brine, or, as *Alchigenes* directs, with plenty of hot Oil, before the Things first order'd are to be applied. Inwardly are to be exhibited, *Aristolochia* in Wine, or *Serpyllum*, or *Calamint*, or Wild Rue, or Trefoil, or half a Hemina of the Juice of the Root of *Asphodel* mixed with Wine. *P. Æginet. lib. 5. cap. 9.*

This Author makes two Sorts of *Scolopendra*, the terrestrial and marine; and says, that the Bite of the latter is succeeded sometimes by an aqueous and pellucid Tumor; but that of the other, by a Redness of the tumify'd Part: But *Oribosius*, *Aetius*, and *Ætuanus*, make no such Distinction of a *Scolopendra*.

*Aetius* advises the same Remedies as are prescrib'd for the Bite of the *Mus Araneus*, with the Application of Salts mixed with Tar, or Cedria with Honey, or Garlick with Fig-leaves, and Cumin and Ervum in Wine. For Portions, the same Things are proper which are recommended against the *Mus Araneus*, and besides these, Wormwood and Mint in Wine.

**SCOLOPENDRA MARINA**, Offic. Charlt. Exer. 62. Raii Insect. 44. Mouff. Insect. 322. *Scolopendra marina prima*, Rondel. de Aquat. 2. 108. Aldrov. de Insect. 635. Jons. de Insect. 143. *Scolopendra marina rubicundior*, Mouff. Insect. 322. Mer. Pin. 205. **THE SEA MANY FEET**.

It is found in the Bottom of the Sea, according to *Gesner*; or in Oyster-Beds, as *Mouffet* says.

Boiled in Oil, and the Parts anointed therewith, it taketh off the Hair; but the Touch thereof excites Itching. *Dioscorides*, *lib. 2. cap. 16.*

**SCOLOPENDRIA**. See **ASPLENIUM**.

**SCOLOPOMACHERION**, from σκολόμαξ, a Woodcock, and μακρίριον, a Knife. An Incision-knife shaped like a Woodcock's Bill.

**SCOLYMOCEPHALUS**. A Name in *Boerhaave* for several Sorts of *Conocarpodendron*, *Hypophyllocarpodendron*, and *Lepidocarpodendron*.

**SCOLYMUS**. The Artichoke. See **CINARA**.

The Characters are;

The Calyx is squamous; the *Ova* are separated from one another by a small, thin Leaf which grows to them. The Seed, when ripe, still adheres to the Leaf: It has the Appearance of a Thistle.

*Boerhaave* mentions two Sorts of *Scolymus*, which are:

1. *Scolymus*; *Chrysanthemum*. *C. B.* 388. *Tourn. Inst.* 480. *Boerb. And. A.* 91. *Scolymus*, Offic. *Scolymus Theophrasti sive Eryngium luteum Monspeliensium*, Park. 972. *Carduus Chrysanthemum Narbonensis*, Ger. Emac. 1155. Raii Hist. 1. 258. *Spina lutea*, J. B. 3. 84. *Cichorium luteum Scolymoides spinis horridum, Narbonense*, Hist. Oxon. 3. 55. **GOLDEN THISTLE**.

It grows in Italy; and the Root, which is the Part used in Medicine, is supposed to agree in Virtues with that of *Eryngo*. See **ALÆ**.

2. *Scolymus*; *Chrysanthemum*; annuus. *A. R. Par.* 3. Bot. Monsp. *Cichorium luteum, Scolymoides, spinis horridum, Hispanicum annuum*. M. H. 3. 55. *Boerb. Ind. Alt. Plant. Vol. 1.*

The Root of the *Scolymus* boiled in Broth, in the Spring Time, is reckon'd a wholesome Aliment: The same decocted, and taken with Vinegar and Oil, is a Cathartic. *Hist. Plant. ascript. Boerhaave.*

**SODYMUS SYLVESTRIS**. See **CINARA**.

**SCOMBER**. Offic. Aldrov. de Pisc. 270. Schonef. Ichth. 66. Raii Ichth. 181. Ejsid. Synop. Pisc. 58. *Scomber sive Scombrus*, Gesn. de Aquat. 841. Jons. de Pisc. 63. *Scombrus* Bellon de Aquat. 200. Rondel. de Pisc. 1. 234. Salv. de Aquat. 241. **THE MACKREL OR MACAREL**.



It lives in the Sea, and is commended for the Jaundice, and Obstructions of the Liver.

This Fish is well known, and always found in the Sea, but never in fresh Water. It is fished for when about the Size we usually see it; for it afterwards increases in Bulk, and is not looked upon as the same. This Fish is much used in *England*, but only for a certain Season of the Year, after which it disappears; but in some Countries they have it at all Seasons. Those are best which are fresh, thick, tender, juicy, and agreeable to the Taste. When it is salted, it becomes not so well tasted.

It is nourishing Food, and reckoned to be of a dissolving Nature; but is heating and not reckoned wholesome, producing viscous and gross Juices, and is not easy of Digestion. It contains much Oil, volatile Salt, and Phlegm. *Bellonius* blames those who boil Macarel, and says it should be roasted, and seasoned with such Things as promote Digestion. Undoubtedly the Roasting divests it more of its viscous and gross Juices. It agrees, in the Spring and Summer, with young People of a healthy Constitution, who have a good Stomach. *Lemery on Foods.*

SCOMBRUS. The same as SCOMBER.

SCOPARIA. See CHENOPodium.

SCOPS. *ουδφ*. The Name of a Bird, a Sort of Owl, of no Use in Medicine.

SCOPTULA. The same SCAPULA.

SCOPULA. A Brush.

The Flesh-Brush is an Exercise most useful for promoting a full and free Perspiration and Circulation. Almost every Body knows what well Currying will do to Horses, in making them sleek and gay, lively and active, even so much as to be worth half the Feeding. This it can no otherwise effectuate, than by assisting Nature to throw off, by Perspiration, the Recrements of the Juices, which stop the full and free Circulation; and by constant Friction, Irritation, and Stimulation, to allicite Blood and Spirits to the Parts most distant from the Seat of Heat and Motion, and so to plump up the superficial Muscles. The same Effect it would produce in other Animals, even human Creatures themselves, if they were managed in the same manner, with the same Care and Regularity. I should think it, therefore, well worth the Pains of Persons of weak Nerves and sedentary Lives, especially those threatened with paralytic Disorder, to supply the want of Exercise of other kinds, with spending half an Hour Morning and Night, in currying and rubbing their whole Body, more especially their Limbs, with a Flesh-Brush. And 'tis a wonder to me, that Luxury has not brought Cold-Bathing and Currying in Use, upon the Animals (especially those of them upon whom they can be so readily made use of, such as Oxen, Pigs, Veal, Lamb, and all Poultry, which naturally delight in Cold-Bathing) which are brought to the Table. For certain it is, that Cleanness and due Exercise (of which Currying is one Part) would much contribute to make all Animals whatsoever, without Exception, healthier in themselves, fuller of Juice and Spirits, and consequently better Food for human Creatures. *Cheyne of Health and long Life.*

SCORAX. The Gum of the Olive-Tree. *Rulandus.*

SCORBUTICA. Remedies for the Scurvy.

SCORBUTUS. The Scurvy.

The Scurvy, a Disorder very frequent in maritime and northerly Countries, is the Cause of many other Diseases; and though it has not been entirely overlooked and neglected either by the Ancients or Moderns, yet it has not hitherto been accurately described, for want of long Voyages and Travels into the cold Countries, where it principally rages.

As this Disorder often imposes on the Physician, by its surprising Variety of Symptoms, it cannot be better known than by forming a Judgment of its Nature, after premising a complete History of it.

It is found among the *Britons, Dutch, Swedes, Danes, Norwegians*, and Inhabitants of the inferior or northern *Germany*; so that it principally affects the northern Nations, and the People living in cold Climates; among these it is in a particular manner injurious to those adjacent to the Sea, to Places overflowed by Sea-Water, to Lakes and Marshes, to fat spongy Soils, to Valleys surrounded by high Hills, and to the Brinks of Rivers or Lakes. It is principally incident to those who lead an idle and sedentary Life; to those who in the Winter-time live cold in Places paved and built with Stone; to Sailors, who use salt Aliments, smoked Fleshes, Biscuits, putrid and venomous Water either by Sea, or on Land; to those who are Lovers of Water-Fowls, salt Fishes, Beef or Pork salted and indurated by the Air or by Smoke; to those who use farinaceous unfermented Substances, Pease, Beans, and salt, acrid, or old Cheese; to those who are subject to Melancholy, Madnets, hypochondriac or hysteric Passions, slow Disorders, and more especially to those who have used large Quantities of Peruvian Bark.

When it attacks such Persons, it seizes, is increased, and maturated with the following Phenomena.

*First*, There is a preternatural Laziness, Torpor, and Love of sitting and lying in Bed, a spontaneous Lassitude and Weight of the whole Body, a Pain of all the Muscles, as it were arising from excessive Fatigue, especially in the Legs and Loins; a Difficulty of Walking, especially up a rising or down a declining Ground; and in the Morning after Sleep, a Sensation of all the Limbs and Muscles, as if they were fatigued and confused.

*2do*. The Respiration is difficult, laborious, and almost defective upon the smallest Motion; there is an appearing and disappearing Tumor of the Legs, which become so heavy as to be immoveable. On the Legs there appear red, brown, yellow and violet-coloured Spots. The Colour of the Face is of a palish brown. There is a beginning Fætor of the Mouth, the Gums becoming tumid, painful, hot and itching, and upon the least Pressure discharge Blood. The Teeth, in consequence of the Retraction of the Gums, are denudated and loose. Various wandering Pains through all the external and internal Parts of the Body, producing surprising pleuritic, stomachic, iliac, colical, nephritic, cystic, hepatic and splenic Disorders. There are, also, various but slight Hemorrhages.

*3tio*. The Putrefaction of the Gums smells like a Carcass; they are, also, inflamed, discharge Blood, and are at last seized with a Gangrene. The Teeth become loose, yellow, black, and at last carious; the Annuli, adjacent to the Venæ Raninæ, become varicose. There are Hemorrhages, which often prove mortal, from the external Skin, without any Appearance of a Wound, from the Lips, the Gums, the Mouth, the Nostrils, the Lungs, the Stomach, the Liver, the Spleen, the Pancreas, the Intestines, the Uterus, and the Kidneys. There are formed every where, especially in the Legs, Ulcers, so obstinate as to yield to no Applications, and which, for a long Time, continue fetid, and inclin'd to a Gangrene. The Patient is afflicted with an Itch, crustaceous Eruptions, a dry and gentle Elephantiasis. The fibrous Part of the Blood taken from the Veins, is black, grumous, thick, though not compact; whilst its serous Part is saline, acrid, and its Surface abounding with a yellowish green Mucus. The Patient is, also, afflicted with corroding lancinating Pains, which soon terminate, and are increased in the Night-time, through all the Limbs, Joints, Bones, and Viscera. Livid Spots, also, appear on the Skin.

*4to*. There are form'd various burning, malignant, intermittent, wandering, periodical, and continual Fevers, which bring on an Atrophy. The Patient is subject to Vomitings, Diarrhæas, Dysenteries, severe Stranguries, Deliquiums, Anxieties, which frequently prove mortal; the Dropsy, a Consumption, Convulsions, a Tremor, a Palsy, Contractions of the Parts, black Spots, a Vomiting and Purging of Blood; a Putrefaction and Consumption of the Liver, Spleen, Pancreas, and Mesentery; and in this State of the Disorder the Contagion is very quick.

Hence 'tis obvious, that the Nature and Effects of a Scurvy are easily understood by those who duly consider what has been said.

Hence 'tis, also, obvious, that the proximate Cause of a Scurvy is such a State of the Blood, in consequence of which it is in one Part peccant, with respect to Thickness, and in the other with respect to its acrid, saline, alkaline or acid Thinness; which Circumstances are above all Things to be accurately investigated and distinguished.

From these Circumstances, known from the Nature of the Disease, all its Phenomena, however surprising, may be deduced.

This is evinced more fully by the Rules which the prosperous or unlucky Cure of this Disorder has established, the principal of which are these following.

In a Scurvy, that which is thick is to be rendered thin; that which is stagnant, moveable; and that which is coagulated, fluid.

That, in like manner, which is too thin, is to be inspissated; and that which is acrid, corrected, and mitigated, not only in a general, but, also, in particular.

And in the Concretion of the one, we are always to have a due Regard to the Nature of the other. Hence great Skill and Judgment are necessary to the successful Cure of a Scurvy.

Acrid evacuating Medicines always exasperate this Disorder, and sometimes render it incurable.

*1mo*. Hence the Cure is to be begun with mild, attenuating, decostruent, and purgative Medicines, exhibited in small but reiterated Doses. Thus,

Take of the Vitriol of Tartar, which is not acid, of the Crystals of Tartar, and of Sal Polychrestum, each half a Dram; reduce to a Powder, to be taken in the Morning



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ing in Whey, drinking twelve Ounces of Whey after it. Or,

Take of Sal Polychrestum, two Drams; of the greater Pilulæ Cochiae, one Scruple; of the solutive Syrup of Roses, with Senna, six Drams; and of distilled Succory-Water, two Ounces; mix up for a Draught. Or,

Take of the Elixir Proprietatis, prepared with Salt of Tartar, two Drams; of the solutive Syrup of Roses, with Senna, seven Drams; and of distilled Fumitory Water, two Ounces; mix up for a Draught. Or,

Take of the greater Pilulæ Cochiae, one Dram; make into twenty-one Pills, of which let the Patient take two at Night, before going to Bed, and five in the Morning, before Breakfast.

2do. We are to proceed in the Use of attenuating and digesting Medicines, such as *Helmont's* Tincture of the Salt of Tartar, one Dram of which may be taken in two Ounces of Wine; *Harvey's* Tincture of the Salt of Tartar, four Drams of which may be taken in three Ounces of Wine; *Ludovicus's* Tincture of Mars, one Dram of which may be taken in one Ounce of Wine; vitriolated Tartar, Crystals, and Cream of Tartar, and Vitriol of Mars, half a Dram of any of which may be taken in three Ounces of Wine; Sal Polychrestum, and *Tachenius's* Salts, prepared from Vegetables, one Dram of any of which may be taken in three Ounces of Wine; the Elixir Proprietatis, prepared with Spirit of Vinegar, two Drams of which may be taken; the Elixir Proprietatis, prepared with Salt of Tartar, two Drams of which are sufficient for a Dose; the Elixir Proprietatis, prepared with aromatic Waters, three Drams of which may be taken for a Dose; the volatile, oleous, aromatic Salts, one Dram of which may be taken; Venice Soap, four Drams of which may be taken; *Starkey's* Soap, half a Scruple of which may be taken; simple Oxymel, four Ounces for a Dose; simple Oxymel of Quills, three Ounces for a Dose; compound Oxymel of Quills, two Ounces for a Dose. To this Class, also, the Conserves of Sorrel and Wood-Sorrel; as, also, Oranges, China Oranges, Citrons, Lemons, and Pomgranets.

3tio. After this we are, for a long time, to persist in the Use of mild Specifics, exhibited in any Form; such as Male and Female Southern-Wood, broad and small-leaved Wormwood, all the Species of Sorrel and Wood-Sorrel, Maudlin, Agrimony, the Male and Female Pimpernel, Mugwort, Costmary, Burdock, Beccabunga, Oak of Jerusalem, red Cabbage and Colly-Flower; wild Parsley, Box, Chervil, Ground Pine, Germander, Succory, wild Cabbage, Cumenoides, Endive, Hemp-Agrimony, Fennel, Fumitory, both Species of Galangals, Ground-Ivy, Docks, Lovage, Marjoram, Baum, Mint, Water and Garden Cresses, Moneywort, Rhubarb, Sage, Scabious, Scordium, Flixweed, Paul's Betony, Nettles, Oranges, Citrons, Lemons and Pomgranats; Barberries, ripe Cherries of all Kinds, Strawberries, Gooseberries, Mulberries, sweet and somewhat acid Apples, Apricots, and all ripe Plums. The Fruit of the red and grey Bramble, Raspberries, Elder-Berries, Tamarinds, and Spanish Whortles.

4to. In the mean time, the six Non-naturals are to be duly regulated, so as to be contrary to the Causes of the Disorder before specified.

In the second Stage of the Disorder, described in No. 2. the Substances last-mentioned are proper. Then we are, for some time, to use somewhat more acrid Antiscorbutics, in the Form of expressed Juices, Conserves, Spirits, volatile Salts, medicated Wines, and Ales. The Substances proper for this Purpose, are the Acriviola, Garlicks, Jack-by-the-Hedge, Cuckow-Pint, wild Raddish, Wormwood, Onions, the greater Celandine, Scurvy-Grafs, Elicampane, Hedge-Mustard, Rocket, Gentian, Hedge-Hyslop, Woad, Dittander, Leeks, the Ptarmica Draco, Garden and wild Raddish, Rue, Savin, Worm-Seeds, Soapwort, the lesser Housleek, Mustard, and Water-Trefoil. An expressed Juice may be prepared thus:

Take of the Shavings of wild Raddish, four Ounces; and of the recent Leaves of Scurvy-Grafs, Moneywort, and Nettle, each four Handfuls: Express the Juice, and mix with Sugar, and let the Patient take two Drams four or six times a Day.

A Spirit may be prepared thus:

Take of the Seeds of Mustard, Garden Raddish, Rocket, Hedge-Mustard, and Garden Cresses, each one Ounce; of the Leaves of Scurvy-Grafs, Dittander, and wild

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Raddish, each two Handfuls. To these, when cut and bruised, add of Sea-Salt two Ounces; of Yest, one Ounce; and of Spirit of Wine, a Quantity sufficient to rise two Finger-Breadths above the Ingredients; distil and cohobate three Times.

A volatile Salt may be thus prepared:

With the preceding Ingredients for the Spirit, instead of Sea-Salt and Yest, mix of Sal Ammoniac bruised, three Ounces; and of Pot-Ash, seven Ounces. Distil as before.

A medicated Ale may be prepared thus:

Take of the recent Leaves of Scurvy-Grafs, Rocket, Hedge-Mustard, and Water-Trefoil, each one Handful; of the recent bruised Seeds of Garden-Cresses, and Garden-Raddish, each two Ounces; of the Flowers of Lesser-Centaury, one Ounce; and of the Roots of Wild Raddish, five Ounces. Put all into half a Firkin of recent fermenting Ale, which is to be used for ordinary Drink.

A medicated Wine may be prepared thus:

Take of the Bulb of Arum, newly dug out of the Ground, half an Ounce; of wild Raddish, one Ounce; of the Leaves of Scurvy-Grafs and Trefoil, each one Handful; of Mustard-Seeds, two Ounces; and of Rhenish Wine, six Pints: Make into a medicated Wine.

Externally Baths for the Body and Feet are to be used, prepared with antiscorbutic Ingredients. Hot dry Frictions, together with specific Liquids, are, also, to be used. Besides, Venesection will often contribute to diminish the acrid Fluids, lessen the Corrosion of the too much distended Vessels, procure a Revulsion, and pave a Way for the Operation of other Medicines to be used.

But according as the acrid Tenuity of the Fluids, the Heat and the Dread of an Hæmorrhage are greater; or according as the Thickness, and languid State of the Fluids, and Coldness and Paleness of the Vessels are greater, we are to use Specifics moderately astringent, somewhat cooling; or hot and acrid. The moderately astringent Antiscorbutics are Capers, Flowers of Broom, the common Ash-tree, Dock, and all the Species of it, Hops, Polypody of the Oak, Rhubarb, and Tamarisks. The somewhat cooling Antiscorbotics are Oranges, Citrons, Lemons, China-Oranges and Pomgranates; somewhat acid and sweet Summer-Fruits, Sorrel, Wood-Sorrel, Succory, Endive, Lettice, Dandelion, Milk and Water in the Summer, Whey and Butter-milk; Tartar, and all acid tartarized Substances. The hot and acrid antiscorbutic Medicines are already enumerated.

For removing the Disorders of the Mouth in this Species of Scurvy, we must use antiphlogistic, antiscorbutic Medicines, appropriated to the various Species of Scurvies. In hot Scurvies of the Gums, the following Gargarisms may be used.

Take of Lemon-Juice and Honey of Roses, each two Ounces; of the dulcify'd Spirit of Salt, half a Dram; and of distilled Rue-Water, two Ounces: Mix all for a Gargarism. Or,

Take of the Spirit of Sea-Salt, two Drams; and of distilled Sage-Water, eight Ounces: Mix for a Gargarism. Or,

Take of recent Lemon-Juice, one Ounce; of Sal Ammoniac, one Dram; and of distilled Rue-Water, six Ounces: Mix for a Gargarism.

In cold Scurvies of the Gums, the following Gargarism may be used.

Take of the Spiritus Theriacalis, and of the Spirit of Scurvy-Grafs, each one Ounce; and of the Honey of Rosemary, two Ounces: Mix for a Gargarism. Or,

Take of camphorated Spirit of Wine, half an Ounce; of the Tincture of Myrrh, one Ounce; of the Rob of Juniper Berries, half an Ounce; of the distilled Water of Wormwood, four Ounces; and of Sal Gemmae, one Dram: Mix for a Gargarism.

For the Cure of the third Species of Scurvy, described No. 3. all the already prescribed Measures are to be used, only the Patient is to use large Quantities of lenitive, diuretic, antiseptic,



septic, and antiscorbutic Medicines; whilst a gentle Discharge by Sweat, Urine and Stool, is to be long continued. Thus:

Take of Furnitory, Sorrel, Brook-Lime, and Water Trefoil, each one Handful; of Whey and Butter-milk, each two Pints: Make into a Decoction. Or,

Take of Wood-Sorrel, one Handful and an half; of Betony and Chervil, each half an Handful; and of Tamarinds, one Ounce and an half: Cut all down, and in three Pints of the Whey of Summer-milk, infuse for an Hour in an almost boiling Heat, tho' without Boiling: Then with the Liquor, when expressed through a Linen-Cloth, mix of the Syrups of Citron-Juice, Rasp-berries and Violets, each one Ounce: Of both these Preparations let the Patient drink one Ounce every Half-Hour during the Day.

The fourth Species of Scurvy is rarely to be cured; but the Method of Cure is to be varied according to the Variety of the Symptoms. Sometimes Mercurials prove beneficial, as also the Medicines last recommended.

If what has been said is duly considered and compared with the Phenomena of the Disorder, and the Dissections of those who have died of it, it will be obvious, that, in order to a successful Cure of this Disease, the Physician must carefully investigate the Nature of the peccant Humor, and the peculiar predominating Acrimony. And as this Acrimony may be either saline and munatic, acid and austere, alkaline and fetid, or rancid and oleous; so a Knowledge of these particular Circumstances will render the Cure of the Disease more easy than it would otherwise be. Hence, also, the Reason is obvious, why Whey, Butter-milk, and medicinal Waters, have so often removed the most terrible Symptoms of this Disorder, and what these Symptoms are? Why the acid Juices of ripe Summer-Fruits, such as Oranges, Citrons, Lemons, Pomegranates, Sorrel, Wood-Sorrel, Vinegar, Rhenish and Moselle Wine, are so often Specifics for this Disorder, and in what Cases they prove such? Why astringent and austere Substances, such as Rhubarb, Docks, Tamarisks, Capers, austere Wine either of the black or red Kind, and Preparations of Steel, so often prove beneficial, and in what Cases they are so? Why the most acrid aromatic Substances, such as Scurvy-Grass, Dittander, Ginger, the lesser acrid House-Leek, alkaline Salts of the volatile, fixed, oleous, aromatic, and saponaceous Kinds, so often prove beneficial without the Help of any other Medicines? Why what is serviceable to one scorbutic Patient, is prejudicial to another? And lastly, why, instead of perplexing ourselves about the various Names of this Disorder, we ought rather to investigate the peculiar Genius of each Species of Scurvy, as if it was a distinct Disease? *Bærbaave Aphor. & Mat. Med.*

The Name Scurvy is at present so extensive and common, that almost any chronical Disorder, if accompanied with any Degree of Impurity, comes under that Denomination. Thus nothing is more usual, than to class a Cachexy, a Gout, a Dyspnea, a Palsey, an Erysipelas, a Colic, an Atrophy, a Rheumatism, the Purples, and several others, among the scorbutic Disorders. 'Tis, also, customary for ignorant Physicians, when, from certain Signs, they can neither know the Disease nor its Cause, to affirm that it is a Scurvy, assigning for its Cause a scorbutic Acrimony. In Practice there, also, frequently occurs a singular Disease, accompanied with surprising spasmodic and convulsive Symptoms; in which Case the Ignorant either refer the Disorder to Fascination, or falsely call it by the Name of the Scurvy. This Opinion is opposed by some celebrated modern Physicians, who either absolutely deny that there is any such Disorder as the Scurvy, or pretend that it is only an Exacerbation of the hypocondriac and hysterical Disorders. But in this they are mistaken, as will afterwards appear.

A Scurvy, properly so called, is a violent Injury of the Functions of the whole Body, arising from a preternatural Dyscrasy and Corruption of the Blood and vital Juices, produced by the Fault of the Diet and Air, familiar not only to the Inhabitants of maritime and northerly Parts, but also to Soldiers residing in Camps; and not to be cured without great Difficulty.

This Disorder, which is accompanied with various and terrible Symptoms, principally discovers its Nature in the external Parts; for it is approaching, a spontaneous Lassitude seizes the whole Body, which is succeeded by a Heaviness of the Legs and Feet, accompanied with an Inability of Motion: Then the Colour of the Face recedes from its natural Redness, an Ichor mixed with Blood is discharged from the Gums, whose Flesh is relaxed and consumed to the very Roots of the Teeth, which by that means are rendered loose. In the Legs there appear Spots of various Figures, Bulk and Co-

lours, and which frequently terminate in malignant Ulcers. As the Disorder increases, the Limbs are generally seized with lancinating Pains, either of the wandering or fixed Kind, accompanied with a certain Inability of Motion or convulsive Strictures.

That a Scurvy was not altogether unknown to the Ancients, is pretty certain from *Hippocrates*, who, in his *Treatise de Internis Affectionibus*, describes the Scurvy under the Name of the *Disease of the Spleen*, in the following manner: "The Person, says he, who is seized with this Disorder has his Abdomen inflated, then his Spleen becomes tumid, hard, and afflicted with acute Pains. The Colour of the Face becomes black, or pale, resembling the Rind of a Pomegranate. The Gums have a fetid Smell, and are separated from the Teeth. Ulcers resembling nocturnal Putrefactions, appear on the Legs; the Limbs are extenuated, and the Patient is costive." *Pliny*, also, in *Histor. Natural. Lib. 25. Cap. 3.* beautifully confirms this, in the following manner: "When *Cæsar's* Army was on the other Side of the *Rhine* in *Germany*, by their drinking insalutary Waters, supposed to be contaminated by some Spells, there appeared among them two new Disorders; one of which being a putrid and fetid Disorder of the Mouth, they called *σφοδράκη*; by means of which, in two Years Time, all the Teeth dropt out. Whilst the other so injured the Nerves of the Legs, as to loosen the Joints of the Knees, and venerate the Legs; from which it got the Name of *σκηλετογβη*."

But in order to render the Nature and Genius of a Scurvy more conspicuous, we shall trace the History of this Disorder with all its terrible Symptoms, through the several Parts it generally affects, beginning with the Abdomen. Patients of this kind do not very often complain of a Weight and Pain of the Stomach, tho' they are sometimes affected with a Nausea, Cardialgia and Vomiting. The Appetite is, in some, pretty much impaired, and in others preternaturally increased. But it is quite otherwise with respect to Thirst; for there is scarcely any Desire for Drink. Acid, bitter, nidorous, and fetid Eructations are frequently discharged with Violence. Rumbings and a Noise are frequently perceived in the Stomach and Intestines. Some have their Bodies very soluble, whilst others are so costive, that the indurated Faeces can hardly be discharged. In some the *Anus* is, as it were, drawn inwards; so that nothing can be commodiously introduced into it without the greatest Uneasiness. In the Abdomen are violent Colic-Pains, far different from those of the common Kind; for they are lancinating, acute, and so intolerable, that the Patient is ready to lay violent Hands on himself. Nor in this, as in other Colics, is the Abdomen distended with Flatulences. Since the Navel is drawn inwards, so far that an ordinary Fist may be put into the Cavity. This Disorder is long protracted, nor does it easily yield to Medicines and Fomentations, but has this peculiar to it, that it frequently terminates in a Palsey.

We now come to consider what Symptoms occur in the Breast under a Scurvy. Patients of this Kind are afflicted with a Difficulty of Breathing, which frequently arises, or is exasperated, by excessive Motion. This is often accompanied with an Uneasiness which the Patients perceive under the Diaphragm, in the Middle between the Hypochondria, where the *Cartilago Eniformis* is situated, and which does not suffer them to breathe freely, except in an erect Posture. There is an easy Transition from this Disorder to a Dropsy, which first discovers itself by a Swelling of the Legs, and then of the Abdomen, especially if drastic Purgatives have been used. Besides the Difficulty of Breathing in the Thorax, a Pain is perceived sometimes in the Left, and sometimes in the Right-Side; sometimes towards the Back, and sometimes towards the Sternum, and at other times in the Sternum. But this Pain ought not to be confounded with a true Pleurisy, in which the Pain is continual, pungent, and accompanied with a Fever, a continual Cough, and an Expectoration of coloured Matter. But this is not observed in a scorbutic Pleurisy, where the Pain is most acute, but not continual; since it recurs by Intervals; nor is it accompanied with Thirst and a Fever; nor is the Breathing difficult, except under the Pain. Besides, in a scorbutic Pleurisy, the small and unequal Pulse is quite different to that which happens in a true Pleurisy. Sometimes there is no Cough, or one which is not very troublesome; and when such a Symptom is present, it proceeds not so much from any Disorder of the Thorax, as from a Matter falling down on the Glands of the Fauces. This Disorder may, therefore, be justly called a spurious scorbutic Pleurisy, and may be easily distinguished from a true Pleurisy, because the former continues longer than the latter. A Palpitation of the Heart is, also, frequently incident to scorbutic Patients, who are, likewise, subject to Convulsions of the Breasts, and Deliriums, into which they fall when they endeavour to get out of Bed, without any external Cause. But these Deliriums,



differ from others in this, that during the former, the Pulse is large and strong; whereas, in other Deliquiums, it is small and intercepted. Besides, in the Thorax, because in it the Oesophagus is situated, there happens another Symptom; for scorbutic Patients frequently complain, that their whole Gullet is obstructed, and that something like a Stake is contained in it, which would so hinder the Deglutition of the Aliments and Drink, that if any Attempt was made that way, they would run a Risk of being suffocated.

Having thus considered the Thorax, we now proceed to the Neck, Fauces and Head, where various Symptoms occur; such as a preternatural Discharge of the Saliva, a Symptom very frequent to scorbutic Patients. The Gums, also, are in this Disorder greatly affected, since in the Beginning they become tumid, and, when gently handled, discharge a serous Blood. A luxuriant Flesh is, also, often copiously formed on them, which is at last accompanied with a highly fetid Smell. When the Gums are thus indisposed, the Teeth begin to be loose in their Sockets; so that they may sometimes be taken out. There is, also, frequently a Tooth-ach, without any manifest Cause; but this Tooth-ach differs from others in this, that it suddenly disappears, and easily recurs. The Patient is often afflicted with violent and generally wandering Head-achs, which principally have their Periods towards the Evening, but terminate in the Night-time upon the Eruption of a Sweat. Vertigos, also, and Dimness of Sight, frequently happen, and, at certain Intervals, a Drowsiness; and, on the contrary, other Patients are for many Weeks tormented with Watchings, without being weakened, as it happens to feverish Patients. Sometimes, also, an excessive Dejectedness, or an absolute Delirium, happens. But this Species of Delirium differs from others in this, that it seizes the Patient in an anomalous manner, and seemingly without adequate productive Causes.

If we consider the external Parts, we find the Scurvy productive of Convulsions, Pains, and Spasms in them. Thus Convulsions frequently happen in the Hams of the Legs, and the Ancles are sometimes contracted. Here and there, also, violent Contractions happen, which frequently remain in the Joints. This Disorder is excellently described by *Georgius Horstius*. Palsies, also, frequently happen, especially in the Legs, after violent Spasms of the Intestines: In which case, a preceding Stupor is the Fore-runner of the approaching Misfortune. But these Palsies differ from an ordinary Palsy, which is gradually formed, continues long, and destroys all Motion; whereas a scorbutic Palsy seizes quickly, disappears suddenly, and in some measure leaves the Motion of the Part, especially if the Patient keeps his Bed. Besides, an excessive Weariness seizes all the Limbs, without any manifest Cause. Some scorbutic Patients, also, complain of a vermicular Pain, and sometimes an obtuse tensive Pain seizes the Marrow of the Bones. Others are racked with the most intense, pungent and lancinating Pains, just as if the Parts were torn asunder. These Pains are generally wandering, and transfer themselves from one Part to another, which they, also, soon leave. Hence they are called the Wandering-Gout. But sometimes they seem to keep a fixed Seat in the Breast; in which Case a Pleurisy is to be dreaded.

Pains arise principally in the Legs, as also about the Ancles and Soles of the Feet; sometimes in the Extremities of the Fingers, the Hip, the Knee, the Back, the Loins, and the Nape of the Neck; and these Pains differ from a true Arthritis, because they wander up and down, not only about the Joints, but also in the Flesh, about the Membranes. In this Disorder the Patient is also afflicted with profuse, troublesome and wasting Sweats, especially in the Night-time. Hæmorrhages, also, sometimes happen from the Nose, and are not to be stopped without great Difficulty. Besides, on the Skin appear Spots, which are sometimes larger, and sometimes smaller, resembling the Bites of Gnats, and which are generally at first red, then purple, and somewhat livid, and last of all black. The larger Spots sometimes occupy the whole Legs, and diffusing themselves far, appear sometimes on the Thighs, Neck and Breast, and vanish, and again appear at Intervals. Sometimes, also, Tumors and Tubercles appear in different Parts of the Body. Oedematous Tumors are formed in the Feet, and Exulcerations happen in the following manner: First, the Part is very painful; then the Cuticula is separated from the subjacent Skin, just as if boiling Water had been poured upon it, the Serum is discharged, and then the Part is intensely painful; but a true Pus is hardly ever observed in such Parts. Some Patients are, also, afflicted with dry and deep Ulcers, which discharge neither Pus nor Sanies, but easily degenerate into a Gangrene. Gangrenes are, also, frequently incident to scorbutic Patients, especially in their Toes; but such Gangrenes differ from others in this, that they seize without a manifest Cause and Inflammation, spread slowly, and are long before they destroy the Patient. These are the principal Signs and Symptoms of a Scurvy, which are not all

equally observed in all Patients, since some are afflicted with more, and others with fewer of them; in some they are more violent, and in others more mild; in some continue a longer, and in others a shorter time.

Having given a compleat History of the Scurvy, together with the several Symptoms with which it is generally complicated, we now come to consider the proximate and remote Causes, from which this, and its several Effects, proceed; because both the Prevention and Cure of this Disorder, in a great measure, depend upon an accurate Knowledge of its true Causes. We have already, in the Definition of a Scurvy, placed its continent and proximate Cause in an excessive Impurity and Corruption of the vital Juices, which is highly unfriendly to Life and Health. But since it is not as yet agreed upon, wherein this Taint principally consists, or how it arises and exerts its unlucky Influence, we shall inquire with more Accuracy into these Circumstances.

'Tis, therefore, certain from Physiology, that a good State of Health, or the Soundness of the natural, vital, and animal Functions, depends upon a laudable Temperament, Mixture and Crasis of the vital Humors, the Blood, the lymphatic and nutritive Juices, and the nervous Fluid, and their due Influx and Circulation, through all the Parts of the Body. But since a due Temperature and Purity of the Juices principally consists in this, that the more subtle, moveable, aqueous, ætherial, elastic, and gently sulphureous Parts, be in a due Proportion mixed and united with the gelatinous and fine mucous Parts; and that the gross, glutinous, terrestrial, and various kinds of saline Parts, as, also, the tartareous, alkaline, sulphureous, or bilious, and superfluous, aqueous, and pinguinous Parts be duly eliminated through proper Strainers and Emunctories; such as the Skin, through which Perspiration is made, the Liver, the Kidneys, the Intestines, and the glandular Coats of the Fauces, Nose and Bronchia, it is sufficiently obvious, that an Impurity of the Juices, or a Caco-chymy, must be produced, when the terrestrial, tenaceous, sulphureous, and saline Parts, retained in the Body, surpass those of the mild and temperate kind. But 'tis to be observed, that the impure Dyscrasy of the Blood, in this Disorder, is not always of the same kind, but differs according to the Nature of the excrementitious Particles, and induces different Symptoms; for in some Patients the peccant Matter is highly viscid, fixed, terrestrial, saline and acid; whereas, in others, it is bilious, saline, alkaline, and sulphureous. Hence Authors have ascribed a Scurvy either to a cold or an hot Cause. To these I add a third Species of Scurvy, which arises from a vapid Disposition of the Juices, tending to a putrid Corruption; and this is found to be a Scurvy of the worst and most malignant kind.

The putrid Corruption and vapid State of the Juices is sufficiently evinced from this, that the Scurvy is often propagated by Contagion, and all contagious Disorders have for their Foundation and Cause putrid Exhalations, which penetrating deep into the Body, like a Fomes or Leaven, contaminate, and convert into their own Natures, the predisposed Humours, especially those of the pinguinous Kind. Hence *Sennertus*, in his *Treatise de Scorbuto*, Cap. 1. & 4. observes, that a Scurvy has been produced only by the Stench of Patients who have died of this Disorder; and *Casspar Hoffman*, in his *Treatise de Febris*, Cap. 57. has excellently described the noxious Nature of scorbutic Exhalations in the following manner. "Immediately, says he, after the Patient's Death, there is no Danger; but after the Carcass begins to grow putrid, all Persons ought to keep at a Distance from it, unless they chuse to be infected with the same Disorder." Besides, the excessive Corruption of the Blood and nutritious Juice is sufficiently evinced, from the spontaneous Lethargy; the Languor and Weakness of the Limbs; the Loss of Strength, so far as to produce a Deliquium; the weak and languid Pulse; the excessive Stench of the Sweat and Urine; and the quick and easy Sphacelation of the external Parts, without any previous external Cause.

But in order to generate the Symptoms which afflict scorbutic Patients, the depraved and corrupted State of the Humours alone is not sufficient; but 'tis, also, requisite the Union of the fluid and solid Parts of the Blood should be destroyed, which may be pretty distinctly collected from various Phenomena accompanying the Scurvy. But this Separation of the Fluid, from the more solid and heavy Parts of the Blood, is by no Circumstances better known than by the Discharges of aqueous Blood, which generally happen from the Nose, Gums, and Anus; as, also, from this, that in the external Parts, such as the Face, Lips, and Lips, the Mouths of the Vessels sometimes spontaneously open and discharge Blood. Scorbutic Patients are, also, frequently subject to copious Discharges of the Saliva, Urine and Sweat, which, also, indicate an excessive Separation of the Serum from the thick Blood. Whereas, on the contrary, the



constant Pains wandering from one Part to another, sufficiently evince the Thinness and subtle Acrimony of the impure Serum; for a thin and acrid Humour extravasated, is easily and quickly convey'd from one Part to another, which principally happens in a wandering scorbutic Gout. To this Cause we may, also, justly refer the Uneasiness of the Precordia, the spasmodic Constriction of the Orifices of the Stomach and Diaphragm, and the lancinating Pains of the Intestines and Breast, commonly called a spurious Pleurisy; together with the Itching and Exulceration of the external Parts. The Lentor and Thickness of the scorbutic Humour may be known from the Tumors, the fixed Pains, the Weariness of the Limbs, the Horror and Stupor. Hence, also, we are to account for the Palpitations of the Heart, the Syncope, the Carus, the Lethargy, the small and weak Pulses, the Sadness, the Melancholy, the polypous Concretions in the large Vessels of the Heart, the paralytic Disorders, the sudden Swelling and Increase of the Body, the Largeness of the Liver and Spleen, and the Tubercles in various Parts of the Body.

Besides, that the Union between the solid and fluid Parts of the Blood, which is highly necessary to its Circulation through the minute Vessels and Viscera, is destroy'd, may be known from Blood taken from the Veins of scorbutic Patients, which is generally grumous, black, heavy and thick, with a large Quantity of fetid and ill-tasted Water. I have frequently seen the Blood discharg'd from the Feet of scorbutic Persons in Water, soon compacted into fibrous Concretions; whilst in others, I have seen the Blood received in a Vessel, soon after covered with a very tenacious, glutinous Pellicle. But in others, instead of a duly consistent Blood, I have, with Admiration, seen, a thin, florid, and acrid Serum discharged, which left no thick, black Substance in the Bottom of the Vessel.

Having thus investigated the Causes of a Scurvy, we now come to examine, which of the Viscera are principally affected by it, and what is most properly to be esteemed its Seat. But as Authors differ with respect to this, we shall enquire which of their Opinions approaches nearest to Truth. The Antients, and among the rest *Hippocrates*, affirm'd, that the Spleen, which they thought the Seat of the melancholic and atrabiliarious Humours, was most affected. But from the accurate anatomical Disquisitions of the Moderns, 'tis certain, that the Seat of this Disorder is rather to be placed in the Liver. Thus *Sennertus*, in *Med. Pract. Lib. 3. Sect. 2. Cap. 2.* informs us, that upon opening the Body of a Person who died of the Scurvy, he found almost the whole Omentum putrid and corrupted, but no apparent Disorder in the Spleen. *Forestus*, in *Lib. 20. Observ. Schol. 2.* informs us, that upon opening the Body of a certain Man of Distinction, who died of this Disorder, he rather found the Liver affected than the Spleen. *Reusnerus*, in *Exercitat. 4. de Scorbuto*, informs us, that he saw the Liver of a scorbutic Man, corrupted, callous, and unfit for the Depuration of the Blood, whilst the Spleen had the Bulk and Colour of a sound Liver. *Horslius*, also, in his *Treatise de Scorbuto, Sect. 2. p. 8.* tells us, that he saw the Liver of a scorbutic Man totally scirrhus, both internally and externally, without any Vessels or Blood contained in it; whilst the Spleen was three Times larger than in a natural State it generally is, appeared very sound, and by its pretty red Colour, and fleshy Substance, resembled the Parenchyma of the Lungs. And Dr. *Willis* often, dissecting the Bodies of many scorbutic Patients, observ'd, that the Parts most frequently affected, were the Liver or the Gall-Bladder; for in some he found the Liver absolutely without Blood, and like a Cow's Udder after the Milk is drawn from it. In some he found the Gall-Bladder entirely empty, in others obstructed with Stones, and in others full of highly bitter Sordes; whilst the Spleen was sound and free from any apparent Disorder.

But I shall not hesitate to affirm, that in this Disorder all the Viscera and Emunctories subservient to the Depuration of the Fluids are affected and disorder'd, since, in consequence of the slow Circulation of the Blood, their minute Vessels and Ducts are easily infarcted, obstructed by a viscid Sordes, and at last absolutely indurated: But in particular, that universal Emundatory of the whole Body, the Skin, through which the thin excrementitious Juices are exhaled, seems to be most considerably affected: Nor are the sanguineous Viscera in the Abdomen, to which the Vena Portæ is distributed, such as the Liver, Spleen, Mesentery, and Omentum, entirely unaffected by this Disorder; because the Liver is destin'd for the Secretion of the impure, saline, sulphureous Parts, and such as have a Tendency to an alkaline Nature. The Spleen, also, principally contributes to the intimate Mixture of the fluid and solid Parts of the Blood, for which Reason the Injuries done to these Parts in a Scurvy,

are to be particularly regarded. But I would have it observ'd, that in this Disorder we are not absolutely to confide in anatomico-practical Observations; because, we rarely find an Opportunity of dissecting scorbutic Persons who have died before they fell into a Dropsy, an Atrophy, an Hætic, the Morbus Niger, or an internal Sphacelus.

That a Scurvy is so long protracted and so obstinate, as with Difficulty to yield to the most proper and efficacious Medicines, is, in my Opinion, owing to this, that the Laboratory of Digestion and Chylification, by which I mean the Stomach and Intestines, is disorder'd, and considerably injur'd: For as the intimate Dissolution of the Aliments, and the Preparation and Extraction of a laudable, sweet and chylous Juice, depend intirely on the Temperature, gently spirituous Quality, and sufficient Influx of the Salival, gastric and pancreatic Menstruums; so when by the Impurity of the Blood, these menstrual Liquors plainly lose their temperate Nature, they only produce a crude, viscid, and acid Chyle; which being convey'd to the Blood, by its peccant Fomes, not only sustains, but also augments the Intemperature and Impurity of the Juices.

Having traced the continent and proximate Causes and true Seat of a Scurvy, and its several Symptoms, and consider'd in what Manner it diffuses itself to all the Parts of the Body, we now come to investigate whence these internal Causes of the Disorder derive their Origins; and this, in my Opinion, is best done by carefully adverting to what the Physicians commonly call the external non-natural Causes, which are daily necessary to the Preservation of Health. Thus, 'tis certain from Experience, that the Scurvy is endemial and familiar to some Countries, especially to northern and maritime Climates, such as those of the *Danes*, *Norwegians*, *Zealanders*, the *Freezlanders*, the *Ditmarshians*, the *Dutch* and the *Swiss*; the Cause of which is to be sought for in the Atmosphere, which being impregnated with impure, putrid, saline, and too aqueous Exhalations, is by that Means in a great Measure depriv'd of its elastic and expansive Force, on which the Tone and Strength of the Solids, and their moving and systaltic Force depend. Hence, in southerly Climates, marshy, dank, and low situated Places, where Inundations, Stagnations of Water, and cloudy Weather frequently happen, are very fit for generating the Scurvy, certainly, for no other Reason, than that the Air impregnated with many moist Exhalations and Vapours, by greatly relaxing the moving Fibres, retards and diminishes the Circulation of the Humours, and consequently the natural Secretions and Excretions.

But since, according to *Hippocrates*, in *Lib. de Flatibus*, Diseases proceed not only from the Air, but, also, from the Aliments: So we find from Experience, that hard, high-salted Beef and Pork, the compact Fleashes of old Animals, when much salted and indurated in Smoke, as also Fish, especially of the Sea Kind, when salted and hardened, greatly contribute to render the Scurvy familiar to some northern and maritime Countries. Pulses of a gross Texture, especially those produced in dank and marshy Places, and coarse, hard Bread, prepar'd of Rye reaped in rainy Weather, or which has contracted a Mouldiness, have, also, a Tendency to produce the Scurvy; which Disorder is, also, generated by crude, hard, saline and stagnant Waters, daily us'd; and by Ales prepar'd of such Waters, when not duly impregnated with Hops, or when they become acid or feculent. And all these Causes are far more injurious, if at the same Time the Life of the Patient is inactive, and free from Labour and Exercise; for by this Means the vital Circulation of the Fluids, and the Secretions and Excretions depending upon it, are greatly retarded, and a Thickness of the Blood and Humours induc'd.

'Tis, also, observable, that Persons of a spongy and loose Habit, those of a sanguineo-phlegmatic Temperament, those who are corpulent, and whose Vessels are very small and numerous, are more subject to a Scurvy than those of dry, slender and firm Habits, who have larger Vessels: Because, in the former the Circulation being slower, and the Secretions more languid, the pinguious watery Juices, upon the Approach of any Miasma, quickly degenerate into a putridinous Corruption. It is, also, observed, that Women are more subject to the Scurvy than Men; Persons who reside in Towns more than the Country People; and studious Persons more than the common People, who by Exercise and Labour expel by Perspiration the peccant Humours accumulated in their Bodies.

But nothing has a greater Tendency to corrupt the Mass of Blood, pervert the Laws of the Animal Economy, and suppress the several Evacuations by Stool, Sweat, and Urine, than a Suppression of the Menfes in Women, and of the Hemorrhoids in Men: So nothing can have a more immediate Influence in producing the Scurvy. Barren Women

are,



are, also, subject to this Disorder; and those whose Menfes have ceas'd on account of their Age; and in general all who totally omit usual Evacuations of Blood, whether by Scarification or Venesection; for by this Means the Humours being copiously accumulated in the Body, cannot pass freely through all the Vessels, but becoming stagnant here and there, contract an Impurity which is the Origin of the Scurvy. According to *Solomon Albertus, Eugalenus*, and *Willis*, excessive Hemorrhages from the Nose, the Uterus, the hemorrhoidal Veins, and in child-bed Women by the Lochia, have no less a Tendency to generate the Scurvy, than a Suppression of the usual Evacuations of Blood: For too great a Loss, as well as a Redundance of Blood, lays a Foundation for a Stagnation and Corruption of the Humours.

Old Persons are most subject to this Disorder; for the Diseases most familiar to them have a great Affinity with the Scurvy, because they derive their Origin from an impure, saline, and viscid State of the Blood and Humours. Nor is this difficult to be comprehended; for in the Decline of Life, the minute Vessels by which the Excretion of the Sordes is principally made, the Parts are nourish'd, and the Lymph is intimately mix'd with the Blood, begin to be dried, contracted, and render'd narrow; hence they cannot duly perform their Functions, by which Means the whole Mass of Blood is, in process of Time, rendered impure.

Among the remote Causes of a Scurvy, we may, also, justly reckon whatever weakens the Strength, and diminishes the vital Motions, together with the Secretions and Excretions. Nothing has a greater Tendency to produce these Effects, than violent Perturbations of Mind, induc'd by anxious Care, Sadness and Grief. Thus *Eugalenus in Tr. de Scorbuto, Obs. 15.* positively affirms, that all those who live on coarse Aliments, and labour under long Grief, are greatly dispos'd to the Scurvy. This Doctrine is confirm'd by *Willis*, who observes, that some have been rendered scorbutic by a sudden Fright; for the Passions of the Mind are of singular Efficacy in infringing the Strength of the Solids, and the Circulation of the Blood, which depends upon it: Hence the Humours circulating slowly, become thick, unfit for passing through the minute Vessels, and at last impure. Hence there is an easy Transition to the Scurvy.

As Ease and want of Exercise dispose to the Scurvy, so excessive Motion and Labour too long continued, have generally a Tendency to induce this Disorder; for by this Means, the most pure and subtile Parts of the Blood, nutritive Juice, and nervous Fluid, are dissipated and exhausted: So that the remaining Humours are afterwards easily susceptible of a foreign and corrupted Quality, especially upon the Access of a Contagion. But above all, we condemn unseasonable and intense Exercise, by which the Chyle, as yet not sufficiently digested, is too quickly convey'd to the Blood; and hence arise all the Disorders we have already observ'd to proceed from a bad Digestion and a crude Chyle. Thus *Galen, in Lib. 2. de Sanitate tuenda, Cap. 2.* informs us, "That when Exercise is perform'd, a large Quantity of crude and inconcocted Aliments and Juices ought not to be in the Stomach or Vessels, lest these should be convey'd to all the Parts of the Body before they are duly prepared by a mature Concoction."

Nothing, also, more easily and readily disposes to the Scurvy, than when any previous Disorder has left a kind of Taint in the Blood, the alimentary Juice, or any of the principal Viscera. Hence nothing is more frequently observed in Practice, than that a Scurvy succeeds continual and intermittent Fevers, when preposterously suppressed; or when the Patients, as yet weak, eat liberally. The Reason of this is obvious; for the vital Juices being, by the febrile Heat, deprived of their due spirituous Quality, and their most subtile and sulphureous Parts, circulate with Difficulty. Hence the Miasma, left by the preceding Disease, easily contracts a foreign Quality. But not to mention the many Observations which evince the Power of all Disorders to produce the Scurvy, we shall only specify the Affinity between the hypochondriac Disorder and the Scurvy; for the latter very often either accompanies or succeeds the former, so that some Physicians have falsely asserted, that there was no Difference between these Diseases.

The Patient's Method of Life, also, sometimes proves the antecedent Cause of a Scurvy. Thus Mariners, who undertake long Voyages, are surrounded with a moist Air, and eat large Quantities of gross and high-salted Aliments, are in a principal Manner subject to it. The Scurvy is, also, very frequent in a Camp; because the Soldiers, observing no Regimen, drink stagnant Waters, and often corrupted Liquors, eat crude, and sometimes half putrid Aliments, mouldy Bread, and rancid Bacon; expose their Bodies to an impure, moist and cold Air, especially in the Night; and waste their

Strength by Watchings and Hunger. *Olaus Magnus, in Lib. 16. de Regionibus Septentrionalibus, Cap. 51.* tells us, "That by high-salted and smok'd Fish and Flesh, by cold and crude Aliments, and by ill-bak'd Bread, the Scurvy is produced, in which the Fauces and Gums become putrid, the Stomach is tormented, and the Teeth are seiz'd with a Stupor and become loose." *Hochsteterus*, also, in *Obs. Med. Decad. 7. Cas. 10.* has a long Observation concerning the Scurvy, as a Camp Disease, formerly raging in the Middle of Germany, the most considerable Circumstances of which Observation are these following: After the King of Sweden, in the Year 1634, subdued *Ausburg*, the Soldiers billeted in the Houses of the Citizens brought into the Town a burning malignant Fever, accompanied with a Delirium and Petechiæ, under which the Emperor's Soldiers, also, laboured, so that great Numbers were cut off by it. But this Disorder remitting in the Beginning of the Winter, many of the Citizens complain'd of a Weariness, Sense of Weight, and Inability to walk, nor could they stand upright on account of the Rigidity, Pain, and Hardness of their Legs, which in some were swell'd, and in others extenuated. Those who were of dry Constitutions, had the Tendons, Nerves, and Muscles of their Legs drawn upwards, so that they could not extend them; and sometimes this Disorder of their Legs was accompanied with an acute Pain, and sometimes not; some were able to tumble up and down in their Beds, but not to extend their Legs; and many of these Patients died about the End of the cold Winter, in the Year 1634. The Legs of some were so weak, that they could not stand upon them, though they were capable of moving themselves in Bed. Spots of the Skin were common to all these Patients, and appeared first red, like Lentils, then blewish, and then livid, sometimes covering the whole Legs. The Gums of the younger Patients were seized with a lax and flaccid Tumor, which when roughly handled, or rub'd, a black and fetid Blood was discharg'd; the Breath was, also, disagreeable, and the Mastication defective: A Leucophlegmatia, an Ascites, a Tympanites, an Atrophy, a Diarrhæa, or a Jaundice succeeding, prov'd mortal to the Patient. Under this Disorder the Sick could not well bear a dry Air, on account of the Ebullition of their Blood. Hence, also, excessive Motion was prejudicial to them.

Having given the History, enumerated the Signs, and specified the Causes of a Scurvy, it will be easy to distinguish it from other Disorders, with which, in regard to its Symptoms, and the impure Dyscrasy of the Blood, it seems to have a great Affinity. I know that many, both of the antient and modern Physicians, affirm, that a Scurvy is the same Disease with that described by *Hippocrates in Lib. de Intern. Affect.* under the Name of *Ileum Cruentum*; for in this Disorder, as well as in the Scurvy, the Breath is highly fetid, the Gums recede from the Teeth, Hemorrhages of the Nose happen, and sometimes Ulcers of the Legs appear, some of which are cur'd, whilst others become worse. But since the Spots of the Skin, by which the Scurvy is at present discovered, are not so much as mentioned by *Hippocrates*; and since those labouring under the *Ileum Cruentum*, are said to be sufficiently capable of walking, or labouring, whereas those afflicted with the Scurvy have a Languor, Weight, Coldness of the Legs, and an Inability to walk, I can hardly induce myself to embrace the Opinion of these Physicians. Some, also, refer the Scurvy to the Black Jaundice, in which, also, the Breath is fetid, and the Gums, being corroded, discharge a black Blood, and have Ulcers form'd in them, which are with Difficulty brought to a Cicatrix. The Patients are, also, afflicted with Laziness and Languor, and the Disorder is not cur'd without great Difficulty. But though these two Disorders, on account of the violent Corruption of the Humours, have a great Affinity; yet they differ in this, that in the Black Jaundice the Colour of the Face and whole Body is black, the Fæces are porracious, a bitter Taste is perceiv'd in the Mouth, neither is there any Fever, or Force of Contagion. Besides, in a Black Jaundice, the Liver is principally affected; whereas, in a Scurvy, all the Viscera are disorder'd, and the nervous System afflicted with lancinating Pains and Spasms; which, however, does not happen in the Black Jaundice.

A Scurvy is, also, easily distinguished from hypochondriac and melancholic Disorders, with which, however, it is frequently accompanied; for that in hypochondriac and melancholic Disorders, on account of the destroy'd Tone of the Viscera, and the slow Circulation of the inspissated Blood, there is a certain Impurity and Corruption of the Humours, as also Spasms and Pains, from a Stagnation of the Juices, yet the Mass of Blood is not so putrid and corrupted, nor impregnated with so many and so acrid Salts, as in the Scurvy.



Scurvy. Hence, not only the contagious Force, but, also, the Spots, the putrid Ulcers, the relaxed and bloody Gums, the Weariness of the Body and Limbs, and the Loss of Strength, sometimes productive of Deliriums, all which are the Symptoms of a Scurvy, are wanting. Besides, the Scurvy, on account of that Corruption which preys both on the solid and fluid Parts, on account of the Spots, Pains and Ulcers, and even on account of its contagious Nature, has a great Affinity with the Lues Venerea. 'Tis, however, of great Importance, to make a due Distinction between these two Disorders, otherwise many Errors will be committed in Practice: We are, therefore, to remember, that the Lues Venerea only arises from Contagion; whereas the Scurvy is produced by a Fault of the Air, Aliments, Water, or an Abuse of the Non-naturals; for which reason, it is peculiar to certain Regions and Climates. Besides, the Scurvy principally affects the Gums, and renders the Teeth carious; whereas the Lues Venerea rather exulcerates and corrodes the Tonsils, Uvula, Nostrils, and Bones of the Palate. The Urine, also, of scorbutic Patients is thick, highly coloured, and richly impregnated with lixivial Salts; whereas, in a Lues Venerea, the Urine is paler coloured, and turbid, with a slimy Sediment. And, lastly, in a Scurvy, the Spasms and Pains are wandering; whereas, in a Lues Venerea, they are more fixed, situated in the Bones, and exasperated in the Night in Bed.

But a Scurvy has a greater Affinity with no Disorder, than with the red chronical Purples, which is generally free from a Fever, and so common, that, by way of Distinction, it is called the scorbutic Purples; because this, as well as a Scurvy, is produced by a great Impurity of the Humors; but it differs in this from a Scurvy, that, in the former, numerous Pustules, as large as Millet-Seeds, here and there appear with Corrugation, Asperity, and Dryness of the Skin, and being accompanied with a profuse Sweat, diffuse a Stench, especially about the Beginning of the Disease, when the Patient is afflicted with Horripulations, Itchings, Heats, and a certain Oppression of the Breast; but none of these Symptoms happen in a Scurvy. Besides, no other exanthematous Disorder is so instable, especially in Persons of delicate Constitutions, as the Purples, since it suddenly appears and disappears, often leaving no bad Consequences behind it, but a certain Oppression of the Breast, and an Hoarseness; which Symptoms are, however, easily removed by a proper Regimen.

Among the Disorders which bear a great Affinity to the Scurvy, we may also justly reckon that Species of Cachexy, which, by the modern Physicians, is generally called scorbutic. But that we may know how far these Disorders differ, 'tis to be observed, that a Cachexy is neither contagious nor epidemic, nor highly offensive to the Gums, nor accompanied with Spots; all which Symptoms, however, generally accompany a true Scurvy. Besides, the material Cause of a Scurvy differs from that of a Cachexy, which proceeds rather from a Redundance of a thin, than of a glutinous and acid Serum. Hence the external Parts of cachectic Patients Bodies are observed highly relaxed, flaccid and tumid.

Having thus specified the Difference between a Scurvy and other Diseases, which have an Affinity with it, we now come to consider how we may form a prudent Judgment with respect to its Cure and Event. First, then, 'tis to be observed, that the Scurvy is one of those Disorders which neither suddenly seize, nor suddenly forsake the Patient; but proceeding slowly, require a long Time and an exact Regimen, both for their Mitigation and total Cure. Hence it happens, that a Scurvy, upon the slightest Error in Regimen, easily recurs, especially where there is an hereditary Disposition to it, in which Case it is rarely totally removed. The same also happens, when the Disorder is inveterate, the Patient old, or the Body weakened and exhausted by previous Diseases; for, in these Cases, it gradually paves the way to a Dropsy, an Atrophy, a Palsy, Convulsions, a Carus, a Lethargy, an Apoplexy, Sphacelations of the Extremities, and other mortal Disorders. But 'tis otherwise when the Disease is beginning, the Patient young, the Habit firm, and its Origin owing to Contagion; for then 'tis easily cured, especially if its Fomes is carried off by the menstrual or hemorrhoidal Discharge. It is, also, more easily cured by removing the Patient from insalubrious, maritime and northerly Climates, to more healthy and southerly Countries. When hypocondriac and cachectic Patients, or those labouring under a violent Gonorrhoea, are seized with scorbutic Symptoms, the Cure is highly difficult, tho' not absolutely to be despaired of. It is observable, that tho' the Inhabitants of northerly Climates are very robust, yet they are more difficultly cured of a Scurvy than those of southerly Countries. The Reason of which seems to be assigned by *Hippocrates, in Aph. 30.* where we are told, "That those who perspire little, are robust, and not

"subject to Disorders; but if they become sick, they are not without great Difficulty restored to Health;" for in the Inhabitants of Northern Countries, whose Skin is thick, dense and constricted by the intense Cold, the subtle and spirituous Part of the Blood is copiously retained and not exhaled. Hence these People are robust and vigorous: But when they are afflicted with Disorders, which ought to be cured by Perspiration, they are with Difficulty restored to Health, on account of the Thickness and Constriction of their Skins.

A sudden Eruption, and a sudden Disappearance of scorbutic Tumors, frequently indicate a Palsy; Gripings of the Abdomen, and continual Contortions about the Navel, in old Persons bring on a Sphacelation of the Intestines, and sudden Death, or a Tympanitis; the blacker the Spots are, the more malignant is their Nature; and if they degenerate into Ulcers, they are not to be cured without great Difficulty, and often terminate in a sphacelous Corruption. It is, also, a bad Sign, when the Gums and adjacent Parts are exulcerated, and an Abscess is form'd in the Jaw.

Diseases arising from a scorbutic Dyscrasy of the Humours, such as Palsies, chronical Purples, and Cachexies, easily recur, sometimes every Year, and at other times, at longer Intervals, according to the Patient's Method of Living, Regimen, and other Circumstances; and if any Taint is conveyed to the Viscera and nervous Parts, it is not easily removed; for the scorbutic Humour partaking of the Nature of Leaven, and being deeply rooted in the Blood and nutritious Juice, is, with great Difficulty, expelled.

It is, farther, to be observed, that generally hypocondriac and scorbutic Patients, are rarely restored to their former and natural State of Health, because they rarely submit to dietetic Rules and the Directions of their Physicians, but are fond of a sudden Cure by means of Medicines. Hence it is, that running from one Physician to another, and changing one Medicine for another, they render their Disorders worse; especially if Nature being habituated to Medicines, eludes the Force of the most powerful and efficacious. Besides, few Physicians know the Art of treating these rebellious Disorders with proper Remedies, exhibited in a proper Order, Method and Dose; for in these Cases they exhibit powerful and drastic Medicines; whereas it ought to be laid down as a general Rule, that the Scurvy, the most violent of all chronical Disorders, is not to be treated with drastic, but with the most mild and simple Medicines.

Having already consider'd the Origin, Nature and Termination of a Scurvy, we now come to enquire into the Measures most proper to be taken for the Prevention and Cure of this Disorder. But, as in any Disorder, these two Intentions cannot be obtained without removing both its remote and proximate Causes; so there is no more proper Method, both for preventing and curing the Scurvy, than a Removal of its Causes: And as these Causes are to be sought for in the preposterous Use of the Non-naturals, and especially in the Air; since no one, unless infected by another, ever laboured under the Scurvy, provided he has not committed terrible Errors in Diet and Regimen, it is sufficiently obvious, that if we intend to remove the Cause of a Scurvy, we must, above all Things, have a particular Regard to the Patient's Regimen; for which Reason we shall prescribe some dietetic Rules to be observed.

Those, then, who are disposed to the Scurvy, or already affected with it, ought to change the Air in which the Disease was formed, and remove from unhealthy Places where the Air is impure, vapid, deprived of its due Elasticity, cloudy, or impregnated with noxious Exhalations, to Places that are more salutary, and blessed with a purer Air. This seems to be confirmed by *Hippocrates, in Lib. 4. Epidem.* where a Change of Climates is pronounced highly beneficial in all chronical Disorders. This is, also, evinced from Experience; since we know that those who are born and educated in Places fit for generating the Scurvy, enjoy a far better State of Health, when they remove to Places blessed with a more pure, subtle and temperate Air. Nor in this Respect are any Set of People more curious and observant than the *Italians*, who, for the Preservation of Health, have one Place of Residence for the Summer, another for the Autumn, and another for the Winter. But the *Germans*, even those of Note and Distinction, little solicitous about the Purity of the Air, remove from healthy to unhealthy Places, where remaining for a long time, they contract a morbid Habit of Body. Every scorbutic Patient ought, therefore, if possible, to change his Habitation and Air, and to travel from northerly to more southerly Climates, especially to *Italy* and *France*. But if the Patient's Circumstances does not permit him to travel from unwholesome to more salutary Places, the Air is to be artificially corrected by burning Juniper-Wood in the Chimney, or by Amber thrown up in Live Coals.



As for Aliments, those of difficult Digestion are to be avoided; such as the Flesh of old Animals, or Flesh smok'd, high-salted, or become rancid; dry'd Sea-Fishes, and Aliments of an austere and allringent Quality. Scorbutic Patients ought, also, to abstain from pingulous Fleshes, and such as incline to Putrefaction; as also from sweet Substances, which, according to the Diversity of the Juices lodged in the Primæ Viæ, either become acedent, or contract a Lentor, and by that Means induce an Infarction of the Viscera. But it is otherwise with Currants, which, by Means of their mild Sweetness, join'd with a subtile Acid, are laxative, emollient, and correct the Acrimony of the Humours. But nothing is to be more carefully inculcated than a proper Abstinence, or great Moderation in eating and drinking; especially in Patients who are voracious, corpulent, or of sanguineo-phlegmatic Constitutions; because excessive eating generally produces a Redundance of impure and peccant Juices.

Among Liquors, none more powerfully contribute to the Generation of the Scurvy, than Waters that are heavy, stagnant, turbid, and dispos'd to Putrefaction; for which Reason the Patient ought to drink only such Waters as are light, pure, impregnated neither with Salt, nor a calcarious, terrestrial Principle, and in which Meat is easily boiled; and the Ales prepared of such Waters; for it is hardly credible what Mischief is done in northerly Countries by drinking Ales prepared of unwholsome Waters, and not sufficiently hopp'd; which, as they easily become acid and seculent, not only with Difficulty pass through the minute Vessels of the Viscera and Excretories, but also generate large Quantities of Flatulences. Austere Wines, which contain a great deal of Acid, are, also, to be carefully avoided; whereas fragrant sweet Wines, possess'd of a subtile Spirit, moderately taken, prove very beneficial. But the best Wines for scorbutic Patients, are genuine *Hungarian* Wine, as, also, good *Rhenish* Wine, which is still better if impregnated with the Essences or Extracts of Wormwood, Scurvy-Grass, or Elicampagne.

As 'tis certain from Experience, that an indolent Life and excessive Sleep greatly contribute to the Generation of the Scurvy, so there is not a more infallible and efficacious Method, either of preventing or removing it, than due and proper Exercise: For, since the continual Systole of the Heart, and reciprocal Action of the Diaphragm and Thorax, by Means of which the Circulation of the Blood thro' the abdominal Viscera is excellently promoted, alone support and govern the vital Motion of the Solids and Fluids; and since this Motion is greatly assisted by Exercise, during which the muscular Motion is increas'd, and the Fluids contained in the Vessels propell'd, we may, without any Impropriety, call Exercise that Universal Remedy which preserves the natural Mixture of the Fluids, and Structure of the Solids, promotes the Circulation of the Blood and Humours, separates the pure from the impure Juices, and consequently prevents and removes Diseases of all Kinds, the Scurvy itself not excepted. Thus *Hippocrates*, in *Lib. 2. de Dieta*, informs us, "That Idleness moistens and weakens the Body, whereas Exercise dries and corroborates it." The Reason of this Doctrine is obvious, and greatly confirms my Opinion with respect to the Use of Exercise in the Scurvy; for by a sedentary Life, the Circulation of the Blood is render'd slower: Hence, the superfluous Moisture not being sufficiently eliminated through the Excretories, relaxes the fibrous and nervous Parts; whereas, by due Labour, the redundant Moisture is dissipated, by which Means the Tension of the Solids is increas'd, and the Body strengthened. Every thing, also, which diminishes the Circulation of the Blood, such as excessive Watchings, profound Meditations, obstinate Study, immoderate Venery, frequent Drunkenness, and especially exorbitant Passions, such as long protracted Grief and Fear, is to be avoided with the utmost Diligence.

These are the principal Directions to be observ'd, with respect to Diet and Regimen, to which I shall subjoin those Remedies which from Experience I have hitherto found best adapted to remove both the proximate and remote Causes of a Scurvy. Now we have already shewn, that the violent Symptoms accompanying a Scurvy are produced by the excessive Dyscrasy of the Blood, and the Accumulation of the recrementitious Sordes in the Blood, and other vital Juices; and that this Dyscrasy and Accumulation depend upon the slow Circulation of the Blood, and an Infarction or Obstruction of the capillary Vessels in the Viscera and Emunctories. Hence the Medicines adopted to the Removal of this Disorder, ought to dilute and correct the impure, acrid, saline and sulphureous Humours, dissolve those that are tenacious and viscid, open the obstructed Passages of the Viscera and Emunctories, and corroborate the weaken'd nervous

and muscular Systems; for by these Means a free and brisk Circulation of the Fluids through the minutest Canals, and what depends upon it, an intimate Mixture of the Fluids with the Solids, and a mild Temperature of the vital Juices, is excellently obtained.

The Physicians who have wrote expressly concerning the Scurvy, have asserted, that the Dyscrasy of the Humours is of two Kinds; but all of them agree, that, according to the Diversity of the morbid, saline Principle, different, alterative, and correcting Medicines are requir'd, which partly by changing the Acid, and partly by correcting the volatile sulphureous Salt, and allaying the caustic Acrimony, remove the Disorder. Though I grant the Difference of the Salts now mentioned, yet the different and far-fetch'd Correction of them seems to me ridiculous, since, I shall demonstrate, that the only and safest Method of correcting and subduing all morbid Salts, is by proper Fluids.

This Intention, then, is answered by pure and light simple Water, the genuine Menstruum and Dissolvent of all Salts, into which, when taken with a proper Regimen and in a due Quantity, the saline Particles of every Kind lodged in the Blood and Humors, easily immerse themselves, and are by that Means excellently diluted, mitigated and corrected. But besides the correcting Quality of Water, it, also, produces another happy Effect in the Scurvy, whilst it dissolves the tenacious, viscid and coagulated Humours, and frees the infarcted and obstructed capillary Vessels and Emunctories from the impacted, viscid Matter. But this laudable Quality and Virtue is still found more powerful, when Water that is pure, light and subtile, is possess'd with an additional mineral Principle, and impregnated with a sufficient Portion of a neutral, or volatile, or fix'd alkaline Salt; such as the various cold and hot Springs, especially the coroline and selteran Springs, together with those of *Aggra*, *Wildungen*, and *Empfen*; for these being far more active than common Water, pass sooner through the capillary Vessels, enter the Emunctories more expeditiously, and are, for that Reason, highly efficacious in removing Obstructions, and eliminating excrementitious Sordes. Hence 'tis not to be doubted, but the universal Remedy of a Scurvy consists in mineral Waters; especially since for more than thirty Years I have, with great Success, prescrib'd both hot and cold mineral Waters for the Cure, not only of the most obstinate chronical Disorders, especially those of the hypocondriac and hysterical Kind, accompanied with a certain scorbutic Impurity, but also of a confirm'd Scurvy. But the Use of these Waters is succeeded by a far more certain and happy Effect, if an accurate Regimen is, at the same Time, observ'd, and their Efficacy assisted by the repeated Exhibition of proper antiscorbutic and balsamic Medicines.

When these mineral Waters cannot be had, the Cure may be happily obtained by pure and light Fountain-Water; for in obstinate chronical Diseases, pure subtile Waters, impregnated with a chalybeate Principle, are of great Efficacy, as is obvious from the many Cures, not only of a Scurvy, but, also, of other obstinate Disorders, yearly performed by the Waters of *Lauchstadt*, about two Miles from *Hall* in *Germany*; for these Waters contain a subtile Crocus Martis, by which the relaxed Tone of the moving Fibres is excellently corroborated, by which Means the Circulation of the Blood through the whole Body, and the salutary Excretions are greatly promoted, especially if these Waters are us'd both externally and internally. Hence we learn, that the antient Physicians, especially *Celsus*, in *Lib. 2. Cap. 9.* and *Scribonius Largus*, in *Cap. 32.* for what they call the *Lien Magnus*, and the Disorders arising from it, so justly recommended the drinking of Water, in which ignited Iron has been extinguish'd.

But besides mineral Waters, nothing is more effectual in correcting a scorbutic Acrimony than the Milk of Animals, and especially that of Asles, which *Hippocrates*, *Galen*, *Aretæus*, and *Celsus* so highly extol in subduing various chronical Disorders, and especially those arising from Acrimony. Some of the most skillful of the Moderns, also, confirm this Doctrine; and as a Specific for the Scurvy, prescribe Milk, especially that of Asles, or the Whey of Cows, or Goats Milk; concerning which the curious Reader may consult *Drawitzius*, *Balthas*, *Brunnerus*, *Engelenus*, *Pierius*, *Solom. Alberti*, and *Matt. Martini*, who have wrote judiciously concerning the Scurvy; and unanimously confess, that they have cur'd more scorbutic Patients only by a Milk Diet, or Whey impregnated with the Juices of antiscorbutic Herbs, and long us'd, than by all other Remedies whatever; and that those who were wasting away with a Scurvy have received more Strength from this Remedy, than from the best Corroboratives. Nor is the Reason of this Effect difficult to be conceived; for as the violent Symptoms of scorbutic Patients, such as lancinating



ing and spasmodic Pains of the Limbs, Corrosions and Exulcerations of the external Parts, derive their Origin from the excessive Dyscrasy of the Humours, a Diminution of the Excretions by Stool, Perspiration and Urine, and an Obstruction of the Vessels; so 'tis certain, that in order to open the obstructed Passages, dissolve the tenacious Humours, and correct such as are acrid and saline, no Medicines are more proper than those of a diluent and dimulcent Kind, and such as render the Humours fit for Transpiration, among which the most powerful are Asses Milk, which is sweeter than that of other Animals, or the Whey of Cows or Goats Milk, especially when infus'd or gently boiled with antiscorbutic Herbs, such as Scurvy-Grass and Water-Cresses, which, besides a volatile Salt, contain a bitter Principle.

But when a Scurvy is accompanied with an Insarction of the Viscera, and a Cachexy, or, which frequently happens, with the Hypochondriac Disorder, and the Purples, the Cure succeeds best if the Milk is mixed, not only with the milder Acidulæ, such as the *Selteran* Waters, and those of *Wildungen*, and *Toenstein*, but also with the stronger cold Springs, such as those of *Pyrmont* and *Egra*, and thus drank under a proper Regimen. See *Frid. Hoffman. Dissert. de Connubio aquarum Mineralium cum Lactē.*

Besides these Remedies, we must also mention some of the pharmaceutical Kind, and especially those called the antiscorbutic Specifics; among which we may justly reckon Scurvy Grass, and all the Species of Garden and Water-Cresses, Brooklime, Horse-Radish, the Roots of wild Radish, and Mustard; which, by their subtle and salinofulphureous Principles, penetrate into the most recluse Parts of the Body, and induce a surprising Change both on the disorder'd Fluids and Solids; for they dissolve viscid and tenacious Humours, exalt and subtilize such as are fixed and acid, and, by restoring the Tone, Vigour and Motion of the relaxed Solids, prevent a rapid Corruption of the Body. Various Preparations of these Simples are us'd; for some distil Waters, whilst others obtain Spirits from them by Fermentation or Abstraction; others from these Substances, when recent and cut down, express the Juice, which they take by Spoonfuls, either alone or with some proper Vehicle, such as Milk: Others mix them with their Aliments, boil them in Broths, add them to Ale during Fermentation, or prepare Conserve of them with Sugar, as the different Circumstances of the Patient require, which are to be judg'd of by the Physician.

There are, also, various other antiscorbutic Remedies, such as, among Bitters, the Roots of Gentian and Succory, and the Herbs Scordium, Carduus Benedictus, Wormwood, the lesser Centaury, and Water Trefoil: Among Balsamics and Corroboratives, Juniper Berries, the Tops of the Fir and Pine Trees, Winter's Bark, Cascarilla, Peruvian Bark, Copper Bark, the Herbs Spleen-wort, Paul's Betany, White Horehound, Dodder of Thyme, and the Roots of Elicampagne, Zedoary, and Arum: Among Gums, Gum Ammoniac, Sagapenum and Galbanum; and among Wood, Sassafras, Guaiacum, and Aloes; which, if us'd either in Substance or in Decoctions, or Infusions, or reduced to Extracts, or Elixirs, and exhibited at proper Times, in a due Order and in just Doses, are highly efficacious in mitigating the Symptoms and removing the Disorder; for by their active, gently sulphureous and balsamic Principle, they rouse and invigorate the languid Circulation of the Blood, and correct the acid and viscid Intemperature of the Humours.

There are, also, other Remedies no less efficacious in the Cure of a Scurvy; and these, partly by their gently sulphureous and vaporous Principle, and partly by their emollient and correcting Quality, are excellently adapted to allay and soothe the Pains and Spasms: Of these, the most considerable are the recent Fats of Animals, especially human and Dogs Fat, the Cream of Milk, Oil of sweet Almonds obtained without Fire, Sperma Ceti, Castor, Asa-fetida, the Extracts of Yarrow and common Chamomile, the Theriaca Cælestis, Dia-scordium, Saffron, Earth-Worms, the Shavings of the Tooth of the Sea-Horse, and the Elk's Hoofs, of which various Medicines may be prepar'd in a liquid Form, and successfully exhibited according to the different Circumstances of the Patient, and Stages of the Disease.

Having already considered the Cure of a Scurvy, so far as it is obtain'd by those Medicines which attenuate and incise the gross Humours, correct those that are acrid and saline, open the obstructed Vessels, and corroborate the relax'd Parts, we now come to treat of Evacuants, because we derive the Origin of a Scurvy from a Diminution or total Suppression of the natural Excretions by Stool, Urine, and Perspiration; as, also, by the menstrual and hemorrhoidal Discharges. As for Venesection then, whether in the Arm

or the Foot, whether by the Lancet, Scarification, or the Application of Leeches, we affirm, that it is not to be used in the Scurvy without the greatest Caution, and a mature Consideration of all Circumstances. Thus, if the Patient is plethoric and young, if the Disorder is recent, and arises from the Cessation or total Suppression of the Menfes in Women, or the Hemorrhoids in Men, Venesection may be properly and safely us'd, in whatever Part the Physician thinks most proper. But if, as it often happens in the Progress of the Disease, a Redundance of impure and corrupted Serum is generated, then Venesection, especially when copious, by impairing the Strength, would infallibly do more Harm than Good. But when a Diminution of the Quantity of Blood is indicated, and especially when the Pains, Tumors, and various Defections of the Parts, render such a Depletion necessary, it is most safely obtained by frequent, though not copious, Detractions of Blood, and, perhaps, still more properly by Scarification; which Method, as it is safest, so I always greatly approved of it in the Cure of violent Disorders.

As for other Methods of Evacuations, and the Use of Purgatives, I am of Opinion, with other skilful Physicians, that, excluding all drastic Substances, we ought only to use those of the mildest Kind, such as the Roots of Polypody, Sena Leaves, Agaric, Rhubarb and Manna, which when duly mixed with the abovementioned antiscorbutic Ingredients, and us'd by Way of Infusion or Decoction, are highly beneficial, by gently eliminating the peccant Humours lodg'd in the Primæ Viæ. This Intention is answered by the Pilulæ Polychrestæ Balsamicæ, prepared after *Becher's* Manner, of well depurated Aloes, Extract of Rhubarb, bitter Herbs, and temperate balsamic Ingredients, exhibited at proper Seasons, interposing or not, as the Physician thinks proper, the absorbent Powders and digestive Salts. The same Caution is to be observ'd with respect to Diuretics, the more drastic of which, because they too copiously evacuate the Serum, are to be rejected, and those us'd which gently evacuate the viscid and tartareous Humours, such as Decoctions of the five aperient Roots, especially of Parsly, Salery, Fennel and Asparagus, which were, also, us'd by *Hippocrates* and *Aretæus*. The same, also, holds true with respect to Diaphoretics, the best of which are those which open the Pores, render them pliant, and convey the Blood and Humors to the Surface of the Body. But we are to reject those which, by throwing the Humours into too violent Commotions and Exagitations, diminish the Serum and Strength, by excessive Sweat. The safest Diaphoretics are, therefore, these which gently promote Perspiration, such as the bezoardic Liquor of *Buflus*, the Spiritus Nitri dulcis, the Spirit of Tartar, the Mixtura Simplex, the succinated Spirit of Hartshorn mixed with three Parts of the Anodyne Mineral Liquor and Spirit of Scurvy-Grass, Flowers of Sulphur, Æthiops Mineral, Infusions of Tea, Paul's Betany, Carduus Benedictus, Scordium, and Elder Flowers, diaphoretic Antimony, Cerufs of Antimony, calcin'd and uncalcin'd Hartshorn, Amber, Bezoardic Mineral, Medicinal Regulus of Antimony, Native Cinnabar, and Cinnabar of Antimony, compound Powders of Crabs Claws, *Ludovicus's* and my Bezoardic Salt; to which, according to the Circumstances of the Patient, may be added, a Quarter of a Grain of Camphire.

Having thus considered the general Method of Cure, we now come to subjoin some Cautions with respect to particular Cases and Circumstances. In a hot Scurvy, therefore, which seizes young Persons of choleric Habits and accustomed to drink Wine, and arises from a Redundancy of sulphureous and bilious Particles in the Mass of Blood, specific Antiscorbutics, turgid with a sulphureous volatile Salt, such as Scurvy-Grass and its Spirit, ought to be very cautiously exhibited; for, by sharpening the Spicula of the Salts in the impure Blood, and agitating them with a brisker Motion, they exasperate the Symptoms, produce Pains of the Head and Limbs, Anxieties and Inflations of the Spleen, by which Means they do more Harm than Good. But they may be more safely exhibited when corrected with Acids, such as Wood-Sorrel, and the Juices of Citrons, Oranges, Barberries and Pomegranates. Thus, the Conserve of Scurvy-Grass, mixed with an equal Quantity of the Conserve of Sorrel, taken twice or thrice a Day, drinking after it some Antiscorbutic Water, produces very happy Effects, especially if in hot and bilious Patients, it is accompanied with a moistening Diet, consisting of Milk Meats, Emulsions of Sweet Almonds, Decoctions of Barley and Oats, Broths prepared of Fowls, with Lettice, Endive, Sorrel and Cresses, interposing at proper Intervals, gentle Laxatives and Diuretics. But it is to be observed in general, that the Use of antiscorbutic Herbs, and their Juices, whether by themselves or with a Vehicle, ought to be very long persisted in.

When



When a Scurvy proceeds from muriatic Salts, which happens in those who eat liberally of smok'd and high-salted Aliments, and have corroding Ulcers, a stinking Breath, putrid Gums, a thick and saltish Urine, as is generally observed in old Sailors, then happy Effects are produced by Whey, long and copiously drank; by Citrons, China Oranges, and ripe Fruits; whereas spirituous and volatile antiscorbutics are generally detrimental.

Scorbutic Patients are frequently afflicted with lancinating Pains of the Abdomen, and oppressive Pains of the Breast, which ought by no means to be treated with Carminatives or hot Medicines. But it is expedient at proper Intervals, and in due Doses to exhibit my anodyne Liquor, or an antispasmodic Elixir, prepared of the anodyne Liquor, and the Essences of Castor and Saffron. Besides, excellent Effects are produced by Broths of Fowls, prepared with a proper Quantity of Oil of Sweet-Almonds and Sperma Ceti; Whey, boiled with the Roots of Marsh-mallows, red Poppy Flowers, and Earth-Worms; Water-Gruel; and emollient Clysters prepared of Milk, with the Addition of a little Castor and Saffron. No less Caution is requisite, if, as it frequently happens, there are spontaneous Evacuations, Diarrhæas, for instance: For these, if gently treated, generally afford great Relief; but when too soon stoppt, leave behind them Cardialgias, Inflations of the Hypochondria, and Infarctions of the Viscera.

In order to alleviate the intense Pain, and procure Rest, small Doses of Opiates, corrected with Purgatives, or Alexipharmics, are only to be exhibited twice or thrice, in order to preserve the Strength; which, when the Pains cease, is better restored, and renders the Patients fitter for surmounting the Disease. Topics are more frequently hurtful than beneficial in scorbutic Pains, Exulcerations, and Spots, as is principally observable in the wandering Gout, in which Topics, indiscriminately applied, by repelling the peccant Matter to the internal, and especially to the nervous Parts, often excite violent Symptoms, such as Vertigos, Dulness of hearing, Difficulty of breathing, Cardialgias, violent Gripes of the Intestines, and sometimes terrible Convulsions of the Limbs. 'Tis, therefore, better, in this Case, totally to abstain from Topics, and keep the Parts affected in an equal Perspiration, by wrapping them up in warm Linnen Cloths. But if crusty black Ulcers require external Remedies, we are to imitate *Eugalemus*, who prudently advised, that rejecting all acrid Substances, we should only use those of a mild Nature, such as Preparations of the Yolk of an Egg, Myrrh, Olibanum, Saffron, Oil of Roses, and Peruvian Balsam. When there is an excessive Impurity of the Humours, tending to Corruption, we are to be very cautious in ordering Scarifications, for fear of a Gangrene, which may be excellently prevented by Quick-Lime Water, exalted by camphorated Spirit of Wine, and Sal Ammoniac.

Where the Corruption of the Humours is very great, the Tumors and Inflammations easily degenerate into obstinate Ulcers, which create a great deal of Trouble both to the Physician and the Patient. When the Patient is of a dry and delicate Constitution, the Pains and Spasms easily produce Fevers, which greatly waste the Body, and impair the Strength. When the Body is spongy, phlegmatic, and corpulent, the Humours degenerate into a putrid Corruption, which spreads like a Sphacelus, and, in process of Time, produces a great and even a fatal Loss of Strength. For this Reason the prudent Physician ought to attack the Disorder, not only by Topics, but, also, principally by such internal Remedies as cleanse the Blood, and resist Putrefaction. But both Physician and Surgeon ought to take care not to open inflammatory Tumors, before they are come to a sufficient Suppuration: For when this Error is committed, a putrid Corruption is soon formed in corpulent and moist Habits.

In order not only to cleanse and consolidate the putrid and bloody Gums, but, also, to fix the loose Teeth, I have found nothing afford a more instantaneous and efficacious Relief than one Part of my Balsam of Life, mixed with three Parts of the Syrup of Oranges, and applied to the Gums by way of Ointment. If this Medicine cannot be had, we may commodiously substitute in its Room, the Essences of Amber or Myrrh, camphorated Spirit of Wine, and the dulcified Spirit of Salt, mixed with a proper Quantity of Honey. In such Cases, a gentle Scarification is, also, beneficial, in order to procure a Discharge of the ichorous Matter. In bloody Tumors of the Gums, great Benefit is, also, obtained by the external Application of the Unguentum *Aegyptiacum*, mixed with Honey of Roses and Spirit of Scurvy-Grass, or by applying Gum Lac and Spirit of Scurvy-Grass. Internally a Decoction of Horse-Raddish with Milk, or Ale boiled with the Tops of the Pine, produce very happy Effects.

When the Symptoms are mitigated, and the Disease begins to remit, *Matthæus Martini*, in *Traëtat. de Morbis Me-*

*jenterii*, thinks Baths of sweet Rain-Water highly beneficial; and from the Advice of *Fernelius*, in *Observat.* 44. orders their Use to be persisted in for more than ten Years. Nor is this Advice to be rejected, since *Volcanus*, in *M. N. C. Diacur.* 2. an. 6. informs us, that an hypocondriac and scorbutic Patient was, in three Days time, perfectly cured, and recovered his Strength, by using every Morning and Evening a Bath of sweet Waters, prepared with emollient Herbs. In the Waters of the Bath, which were highly fetid, there floated a thick, black, acrid Sordes, which daily became larger. In order to soften and discuss hard and painful Tumors of the Feet and Legs, I have found nothing more beneficial than Baths prepared of the antiscorbutic Herbs, Brooklime, Water-Cresses, and Scurvy-Grass, left after the Expression of the Juice; as, also, Baths prepared of the Tops of Fir and Pine-Trees, frequently used.

I have only one Thing to advise, with respect to the Use of Baths, whether natural or artificial; and that is, that they ought never to be used after a putrid Corruption is discovered in the external Parts; and that they ought not to be too warm, and dispose the Body to profuse Sweats; for hence follow an excessive Weariness of the Limbs, an insatiable Thirst, Palpitations of the Heart and Cardialgias; which, if any one endeavours to remove, by drinking cold Liquors, or other refrigerating Substances, the Tone of the Stomach and Intestines will, in all probability, be greatly destroyed by that means.

Many scorbutic Patients, according to *Martini*, in the Part already quoted, perceive little Advantage during the Cure, but are cured when they dismiss their Physicians, and forbear the Use of Medicines: For Nature being weakened by the Medicines, upon desisting from them, recovers Strength sufficient to subdue the Disorder. This Circumstance was not only adverted to by the ancient Physicians, but, also, recommended for removing various Disorders. Thus, *Aetius*, in *Lib.* 2. *Serm.* 2. *Cap.* 3. and *Rhazes*, order Medicines to be sometimes abstained from for three Weeks; and *Arctæus* asserts, that many Diseases are spontaneously cured by discarding the Physician. This Observation I have often found to hold in the Cure of many chronical Disorders, especially those of the hypocondriac and scorbutic Kinds; for that Maxim of *Celsus* is founded upon Truth, "That sometimes the best Medicine is to use no Medicine at all." *Frederic Hoffman*.

#### SCORDIUM.

The Characters are;

The Flower is like that of the *Chamadrys*, one or two preceding from the Ala of each Leaf. The Calyx is tubulated. The Smell resembles that of Garlic.

1. Scordium; *Offic. Ger.* 534. *Emac.* 661. *Raii Hist.* 1. 576. *Synop.* 3. 246. *Boerb. Ind.* A. 183. *C. B. P.* 247. *J. B.* 3. 242. *Scordium legitimum*, Park. Theat. 111. *Chamadrys palustris*, *Allium redolens*, Hist. Oxon. 3. 423. *Chamadrys palustris canuscescens*, seu *Scordium Officinatum*, Tourn. Inst. 205. 172. WATER-GERMANDER.

*Scordium* has a small, stringy, creeping Root, from which spring a great many square hairy Stalks, about a Foot high, beset with two oblong, round-pointed, somewhat wrinkled and hairy Leaves at a Joint, without Foot-Stalks, having roundish Indentures about the Edges. The Flowers come forth among the Leaves in thin Whorles, of a reddish Colour, having no Galea, but only a Labella. They are set in hairy five-pointed Calyces, at the Bottom of which grow four small Seeds. The whole Plant has a strong aromatic Scent; but with somewhat of the Garlick. It grows in marshy, fenny Places, as in the Isle of *Ely*, in great Plenty, and flowers in July. The Leaves are used.

*Scordium* is sudorific and alexipharmic, of Use both as a Preservative, and a Remedy against all malignant and pestilential Diseases, and putrid Fevers; it resists Putrefaction, and destroys Worms, and is good against the Bites of all venomous Animals; it is an Ingredient in *Venice Treacle* and *Mithridate*; and *Diascordium* takes its Name from it. *Miller's Bot. Off.*

The *Scordium* is bitter, aromatic, and gives a faint red Colour to the blue Paper: It contains an oily, volatile Salt, the Sal Ammoniac of which is not entirely disengaged, but wrapped up in a great deal of Sulphur. The *Scordium* is a good Dissolver; it is aperitive, diuretic, sudorific; the Infusion of it should be drank in malignant Fevers, the Small Pox, Measles, and Diseases of the Skin. It is used after the Manner of Tea, or a Pupil of it may be boiled in lean Broth, to restore the Appetite, kill Worms, and purify the Blood by insensible Transpiration. Half an Ounce of the Extract of this Plant in a Bolus, or an Ounce of the Conserve of its Leaves and Flowers, usually prove sudorific. This Conserve is of Use for purulent Spitting. This Plant is also deterfive and vulnerary: It is used in Lotions, with Wormwood and the lesser Centory. Fomentations are made of these Herbs, and they are applied



as a Cataplasm on Parts which are threatened with a Gangrene. To cure a Gangrene, the spiculated Flesh must first be eaten off with the Water of corrosive Sublimate, and Arsenic, or the Butter of Antimony; for without this Assistance, the vulnerary Plant would be of no Use. The *Scordium* is used in the *Theriaca*, the Mithridate, the Orvietan of *Hoffman's* Composition, *Matthioli's* Antidote, and most alexipharmic Compositions. It has given Name to the *Diascordium* of *Pracastorius*, and to that of *Sylvius*. *Martyn's Tournefort*.

2. *Scordium*; alterum; five *Salvia agrestis*. *C. B. P.* 247. *Boerb. Ind. A.* 183. *Scorodonia*, *Salvia sylvestris*, *Offic.* *Scorodonia*, five *Salvia agrestis*, *Ger.* 536. *Emac.* 662. *Raii Hist.* 1. 576. *Synop.* 3. 247. *Scorodonia* five *Scordium alterum quibusdam*, & *Salvia agrestis*, *Park.* 111. *Scordotis* five *Scordium foliis Salviae*, *J. B.* 3. 293. *Chamaedrys fruticosa sylvestris melissae folio*, *Tourn. Inst.* 205. **WOOD SAGE.**

The wild Sage has several square, woody and hairy Branches, on which are set, by Pairs, rough, wrinkled, Sage-like Leaves, but which are greener and broader than Garden Sage; of a pleasant Smell, but with a Touch of the Garlick. The Flowers grow on the Tops of the Branches in long Spikes, with a small Leaf set on by each Flower; they are yellow, of the verticillate Kind, having no Galea, but in its Place a few purple Stamina; their Calyces are hairy, containing four brown Seeds. The Root is slender and creeping. It grows in Hedges and bushy Places, and flowers in July. The Leaves are used.

Wood Sage is accounted very good for the Gout, Rheumatism, Scurvy and Dropsy; it provokes Urine and the Menstrues, and is an excellent vulnerary Plant, and prevents Mortifications and Gangrenes. *Miller's Bot. Off.*

Its Leaves are very bitter and aromatic; they have a little Taste of Garlic, and give hardly any Tincture of red to the blue Paper; which gives us Reason to believe they contain a Salt like that of the *Germander*, but loaded with more essential Oil, and in which the Sal Ammoniac discovers itself but little. This Plant is very aperitive, diaphoretic, vulnerary and resolvent: *Dodonaeus* prescribes the Decoction of it in the venereal Disease. *Tragus* commends its Juice and Infusion in Wine, as a Medicine very aperitive and sudorific, good to strengthen the Stomach and kill Worms, to provoke Urine, and to carry off the Jaundice and the Tertian Ague; then use it very successfully at *Paris* for the Dropsy, by giving to drink every four Hours a Glass of the Infusion of this Plant in white Wine. *Martyn's Tournefort*.

3. *Scordium*; frutescens; folio angusto *Salviae*; flore luteo. *Boerb. Ind. Alt. Plant. Vol. 1.*

The first Species is found to be an excellent and safe Remedy against the Pestilence. *Rudbeckius* found by Experiment, that this Plant intruded into the Mouth, Intestines and Nose of a dead Body, preserved it from Putrefaction. *Scordium*, among the Antients, was an Ingredient in all Medicines against the Poisons of mad Animals. It expels all foreign Matter, especially what inclines to Putrefaction, by Sweat; it has an intolerable and nauseous Bitterness, but not such as creates a Nausea, by which it seems qualified for killing all Manner of Insects and Worms. But I shall not take Occasion from hence to determine, whether or not the Eggs of Insects, as *Ascher* and others think, are drawn in by Inspiration with the Air, in pestilential Times, and thus cause the Infection, when this Herb, by killing those Worms as soon as generated, seems adapted to remove. It cures a Gangrene, resolves Tumors, and is proper in intermittent Fevers; externally applied, it cleanses Wounds and Ulcers, and mitigates the Pain of the Gout; the expressed Juice, with Sugar, is exhibited in pulmonary Disorders. *Pracastorius* has written largely of the Virtues of this Plant, and *Sylvius* in his *Praxis*, with a great deal of Labour, extracts from it a very penetrating Tincture, which is not to be had so good at the Druggists or Apothecaries, who will not take the necessary Pains for obtaining it. It therefore we would with any Measure of Certainty rely on its Effects, we ought ourselves to take Care of the Preparation. The Extract is called *Diascordium Sylvii*, and supply the Place of the *Mithridatium*, as a Sovereign Remedy. The Conserve is sudorific, and good for the Asthma and Shortness of Breath, and for Virgins labouring under a Chlorosis, and Obstruction of the Menstrues; the Leaves infused in Wine, are serviceable in Dropsies. The second Species is adapted to surgical Uses; for the bruised Leaves, with Vinegar, Litharge, and Salt, cure a Gangrene and Cancer. *Hist. Plant. ascript. Boerhaave*.

*Scorodon*, with other proper Things, is prescribed by *Heister* in Fomentations and Cataplasms, for a Gangrene and Sphacelus, and in a sudorific Potion for a Chilblain.

**SCORODOLASER.** *Asia Fertida.* See **SILPHIUM.**

**SCORPIONA** or **SCORPIS.**

This is a Sea-Fish, by some thought to be the Female of the Sea-Scorpion, because 'tis pretty much of the same Shape; but it is really another Species of Scorpion, far less, and of a cineritious or brownish Colour. Its Principle of Life is so strong, that it moves for some Time after its Heart and Entrails are taken out. Its Bite is not venomous, and it feeds upon Sea-Wreck, and is good Food. Its fixed Salt is possessed of the same Virtues with that of the Sea-Scorpion. *Lenery des Drogues*.

**SCORIA.** The Drofs or Recrement of a Metal.

**SCORITH.** Sulphur. *Rulandus*.

**SCORODON.** Garlick. *Rulandus*.

**SCORODONIA.** A Name for the *Scordium alterum*, five *Salvia agrestis*.

**SCORODOPRASSUM.** See **ALLIUM.**

**SCORODOTHLASPI**, *Ulyssis Aldrovandi*, *J. B.* This is a Species of Thlaspi, or small Plant, which from its Root sends Leaves, resembling those of the Daisy. Some of these Leaves are jagged, others surrounded with small Teeth, and others without Teeth or Jaggs, but nervous and green. From amidst these Leaves arise some small Stalks, which also bear Leaves, and at their Tops Flowers, composed of four small white Leaves and a Pistil, which afterwards becomes a flat Fruit, like an oval Purse, which contains Seeds almost round and flat. The Root is simple, white, and furnished with some Fibres. The whole Plant smells like Garlick, and is of an agreeable Taste, having a small Degree of Sharpness in the Mouth. It is cultivated in Gardens, and is of an highly aperient Quality, and proper to resist Putrefaction. *Lenery des Drogues*.

**SCORODOTIS.** A Name for the *Scordium*; alterum, five *Salvia agrestis*.

**SCORPIACA.** The Name of an Antidote in *Galen de Antidot. L. 2. C. 12.* which is recommended against the Sting of the Scorpion.

**SCORPIO.** *Offic. Schrod.* 5. 346. *Ind. Med.* 107. *Imms. de Insect.* 95. *Charlt. Excr.* 54. *Scorpius*, *Raii Hist. Insect.* 9. *Aldrov. de Inxit.* 577. *Mouff. Insect.* 204. **THE SCORPION.**

It is an Animal with eight Feet, resembling a Crab, only less, and of a blackish, or sooty Sort of Colour. Burnt alive, and the Ashes exhibited, they provoke Urine, when obstructed by the Stone in the Kidneys or Bladder; bruised and applied to the Place, they cure the Poison of their own Stings.

The Scorpion is an excellent Remedy of itself for its own Poison. Some bruise it and apply it to the Wound; others take it bruised in Wine; and others infuse Oil of Scorpion into the Wound, *Heister Chirurg.* The Oil of Scorpions is by some recommended as effectual in a Suppression of Urine, the Bladder being anointed with it hot, or before a Fire, *Idem*.

The Sting of the Scorpion is succeeded by a most violent Pain of the injured Part, with a Coldness, Tension and Numbness; a cold Sweat about the Wound, and over all the Body. They who are stung in the lower Parts, are affected with a Swelling of the Groins; if the Wound be in the upper Parts, and but slight, there is a Tumor under the Armpits; but if the Hurt be considerable, a burning Heat affects the Place, as in Ambustions; and there is an Eruption of Warts, resembling Ants, about the Lips and the whole Body; so that the Patient fancies himself struck with Hail-stones. The Face is distorted; a glutinous Sordes gathers about the Eyes; the Tears are viscous; there is a Hardness of the Joints, and a falling down of the Anus, with a Desire to go to Stool; a Froth about the Mouth, much Vomiting, Hiccups, and Convulsions like those in an Opisthotos.

The Cure is performed by taking inwardly Serpyllum, the Root of Althaea, and Elaphoboscus, which last is an excellent Remedy, whether eaten green, or drank in Powder. The Seeds of wild Parsnep, and Hasle-Nuts, are, also, good Medicines; and the latter worn about the Body, are a Preservative against the Sting of the Scorpion. Or take a House-Snail and apply it, together with the Shell, upon the Place, and the Pain will immediately cease. Earth-Worms are said to have the same Effect. Or take a River-Crab, and bruise it with Wine and Laser, and exhibit it in a Potion. Another excellent Antidote against the Poison of the Scorpion, and with which I cured myself when affected, is thus prepared: Take of Castor, Succus Cyrenicus, Pepper, each four Drams; Costus, Spikenard, Saffron, Juice of Centaury, each two Drams; Honey clarified, a sufficient Quantity; the Dose in the Quantity of a Hasle-Nut, for the Sting of a Scorpion in diluted Wine; but for the Bite of an Asp, in Vinegar. It is of an attractive Quality, so as to attract the poisonous Juice, tho' digested, and settled in the Joints. Garlic, also, bruised either by itself, or with Salt; or Wild Rue, or the Herb Scorpurus, are proper to be applied. I used to bruise a Dram of wild Rue in Vinegar, and with an Ounce of Wax, and a



Quarter of an Ounce of the Resin of the Pine-Tree, and a little Oil, make into a Cataplasm, and apply it to the Place, and it proves an admirable Remedy. Sheeps Dung, also, boiled in Wine, and applied immediately, removes the Pain. *Aëtius, Tetrab. 4. Sermon. 1. Cap. 10.*

Oil of Scorpions is prepared, by putting thirty-five Scorpions into two Pounds of Oil of Sweet Almonds, and after exposing them to the Sun for forty Days, straining off the Oil.

**SCORPIODECTOS**, *σκορπιόδεκτος*, A Person wounded by a Scorpion. *Dioscorides.*

**SCORPIOIDES.**

The Characters are;

It has a Part full of Joints, and convoluted like a Snail or a Caterpillar, having in each Joint a Seed of an oval Figure.

*Boerhaave* mentions four Sorts of *Scorpioides*, which are,

1. *Scorpioides*; folio Bupleuri. *C. B. 287. Clymenos, Dioscoridis. Col. 1. 155, 156.*

2. *Scorpioides*; Bupleuri folio; filiquis lenibus. *Park. Theat. Bot. 1117.*

3. *Scorpioides*; filiquâ crassâ Boelii. *Ger. Emac. App. 1627.*

4. *Scorpioides*; Bupleuri folio, corniculis asperis; magis in se contortis & convolutis. *M. H. 2. 127. Boerb. Ind. Alt. Plant. Vol. II.*

This Plant, by its Signature, promises some Virtue against the Bite of Serpents; but it is not safe to rely upon it in such Cases.

**SCORPIOIDES LEGUMINOSA.** A Name for the *Ornithopodium*; *Scorpioides*; filiquâ compressâ.

**SCORPIOIDES MAJOR.** A Name for the *Heliotropium*; minus; angustifolium; palustre; seu glabrum.

**SCORPIOIDES MATTHIOLI.** A Name for the *Ornithopodium*; *Portulacæ folio.*

**SCORPIOPLECTOS.** The same as **SCORPIODECTOS.**

**SCORPIURUS ANNUUS.** A Name for the *Heliotropium*; minus; angustifolium; arvense; seu hirsutum.

**SCORPIURUS PALUSTRIS.** A Name for the *Heliotropium*; minus; angustifolium; palustre; seu glabrum.

**SCORPIUS.** A Name for the *Genista-Spartium*; majus; longioribus aculeis.

**SCORPIUS MARINUS.** *Offic. Bellon. de Aquat. 248. Schonef. Ichth. 67. Salv. de Aquat. 199. Scorpium, Aldrov. de Pisc. 195. Jons. de Pisc. 41. Gesn. de Aquat. 845. Rondel. de Pisc. 1. 201. Scorpium major. Rondeletii, Raii Ichth. 331. Ejsd. Synop. Pisc. 142. Scorpio, Charlt. Pisc. 23. THE SCORPION FISH.*

It is taken in the *Mediterranean Sea*; the Gall of it is good for Cataracts, an Albugo, or other Infirmities of the Eyes which darken the Sight. *Dioscorides.*

**SCORTUM.** The **SCROTUM.**

**SCORZONERA.**

The Characters are;

The Root is carnosus, and full of a laetuous Juice: The Leaves are alternate; the Calyx is oblong, squamous, and shorter than the Petals of the Flower. The Seed is oblong, and generally contain'd in a Husk.

*Boerhaave* mentions six Species of *Scorzonera*, which are;

1. *Scorzonera*; latifolia; sinuata. *C. B. P. 275. Tourn. Inst. 476. Boerb. Ind. A. 89. Scorzonera nostra & Hispanica viperaria, Offic. Scorzonera Hispanica major, Park. Parad. 301. Raii Hist. 1. 248. Viperaria Hispanica, Ger. 598. Viperaria sive Scorzonera Hispanica, Ger. Emac. 736. Tragopogon Hispanicus sive Iscorzonera, aut Scorzonera. I. B. 2. 1060. VIPERS-GRASS.*

The Root of this Plant is about a Finger thick, but little branched, of a reddish brown on the Outside, and white within, full of a white milky Juice: The lower Leaves are broad, long, sharp pointed, and waved about the Edges, of a pretty firm Texture. The Stalk arises to be two or three Foot high, smooth and round, beset with Leaves, without Footstalks, broad at the Bottom, and growing narrower and grassy at the Ends. The Flowers grow on the Tops of the Stalks in scaly Calyces, compos'd of several Rows of narrow Petals, somewhat like Dandelion, which afterward turn into Down, having long, slender, whitish Seed. It grows in some Parts of *Spain*, but is planted here in Gardens, and flowers in *July*. The Root is used.

It is accounted cordial, sudorific, and alexipharmic, useful in all Kinds of Fevers and malignant Distempers, and is accounted good against the Stings or Bites of venomous Creatures. *Miller's Bot. Off.*

The Root of *Scorzonera* is of a sweetish and not unpleasant Taste, and as good to eat as a Parsnep, whether raw, boiled or pickled; it is even serv'd up at the Tables of Persons of Quality, and prefer'd before a Parsnep, or Skirret.

It is not only good for the Bite of the Serpent *Escurzô*, but for the Bites of all other Serpents. The Virtues hereof are extended, also, to pestilential Fevers, all Manner of Disorders of the Heart, Melancholy, Palpitations, Syncope, Epilepsy, Vertigo, Obstructions of the Viscera, and Affections of the Uterus. *Monardus* has written a Book on this Plant, in which he relates surprizing and even incredible Things of its Virtues against the Serpent *Escurzô*. The *Scorzonera* of the Island *Amagria* is bitterer than the *Spanish*, or what is cultivated in our Gardens, and is very serviceable in the Beginning of a Dropsy, or in a stubborn Jaundice. If you want an hepatic Medicine for gross and adust Bile, this bitterest Sort of *Scorzonera* is most effectual. The mountainous *Scorzonera* is celebrated as an Alexipharmic in *Ephem. Germ. Au. 11. Obs. 81. Raii H. P. 248.*

2. *Scorzonera*; latifolia; altera. *C. B. P. 275.*

3. *Scorzonera*; laciniatis foliis. *T. 477. Tragopogon, lucinatum, luteum, C. B. P. 274.*

4. *Scorzonera*; ficula; altissima; folio plantaginis hirsuto.

5. *Scorzonera*; foliis gramineis. *Sher.*

6. *Scorzonera*; foliis laciniatis; supina. *Becc. Boerb. Ind. Alt. Plant. Vol. I.*

*Scorzonera* takes its Name from *Escorfo*, a *Catalonian* Word signifying a Viper, because it is said to be very effectual against the Bites of that Animal. The *Scorzonera* imported from *Spain* is far superior in Virtue to ours, which wants the aromatic Quality of the *Spanish*. Perhaps it had its Name from its Effects on the Viper, which if but touch'd with the Juice of this Plant, immediately droops and sickens; and it is said, that a Person may take a Viper in his bare Hand without receiving any Harm, if he first rubs his Hand with this Herb; for the Viper will not be able to bite, but faints and sickens. And I know an Apothecary, who commanded his Servant to take in his Hand a living Viper, such as they put into *Venice Treacle*: The Servant was immediately bit by the Viper, and sunk to the Ground, when his Master immediately apply'd this Herb bruised to the Wound, and to the Viper, which still hung to it. The Effect was, that the Viper immediately fell off, and the Servant was cured. The Juice is very serviceable in Inflammatory Diseases; three Ounces thereof being taken in the Morning fasting, are recommended against all volatile Poisons; and the Herb apply'd, cures envenom'd Wounds. The Root, which is perennial, is proper to be taken out of the Earth before it produces Leaves, and to be hung up or dry'd, or preserved in Sand. It is a proper Herb in all Diseases proceeding from too great a Mobility of the Humours, and which require Agglutinants and Demulcents; also, in all Disorders arising from a putrid Blood, such as the Small-Pox, Measles, Pestilence, burning Fevers, Peripneumony and Pleurisy. The Root is an excellent Cleanser and corrective, for which Reasons it is of extraordinary Use in hypochondriac Disorders, being boiled in Barley-Water. The Root bruised in a Marble Mortar, and the Juice expressed through a Linnen Cloth, makes an excellent Medicine; but all its resolvent and nutritive Virtue is lost in Decoction. It is of good Service in Melancholy, and Pains of the Gout, and some use it with Success in an immoderate Flux of the Menfes. There is no Herb more commended than the first, second and third Species in the Phthisis, Extenuations, and the Jaundice. *Hist. Plant. ascript. Boerhaave.*

Besides the foregoing Sorts of *Scorzonera*, *Dale* mentions the following.

**SCORZONERA SUBCERULEA**, *Offic. Scorzonera angustifolia subcerulea, C. B. P. 275. Raii Hist. 1. 249. Tourn. Inst. 476. Scorzonera elatior angustifolia Pannonica, Park. Theat. 410. Viperina 6<sup>a</sup>, Ger. 598. Viperina angustifolia elatior, Ger. Emac. 737. Tragopogonis Species sive Scorzonera major angustifolia subcerulea flore, I. B. 2. 1062. HUNGARIAN VIPERS GRASS.*

It grows in hilly Places, and the Root, which is the Part used in Medicine, perfectly agrees in Virtues with that of the common *Scorzonera*, and may supply its Room.

**SCOTODINOS**, *σκοτόδιος*, or **SCOTODINE**, *σκοτόδιον*, or *σκοτόδιον*. A Vertigo attended with a Dimness of Sight; from *σκοτος*, Darkness, and *δυνα*, a Vortex.

**SCOTOMIA**, or **SCOTOMA**. From *σκοτος*, Darkness. The same as **SCOTODINOS**.

**SCOTOS**. Darkness, or Dimness of Sight.

**SCREATIO**. The Action of Hawking, in order to bring up Matter lodg'd in the *Fauces*; or the Matter thus brought up.

**SCRIBLITA**. A Wafer. *Castellus.*

**SCRIBONIUS LARGUS**. The Name of a Roman Medicinal Author, who lived under the Emperors *Tiberius* and *Claudius*, and wrote many Things in Medicine, of which his Treatise *Of the Composition of Medicines*, is still



extrant, and often quoted by *Galen*: It was dedicated to *C. Julius Callistus*, the favourite Freedman of *Claudius*; and it is only by this Dedication that we are able to judge of the Time in which *Scribonius* lived, for he speaks in one Place of *Messalina* and *Claudius* after a Manner which leaves no room to doubt that he lived under their Reign: "*Messalina*, says he, the Consort of our God *Cæsar*."

Some learned Men have thought that *Scribonius* wrote this Book in *Greek*, and what we now have in *Latin* is nothing but a *Latin* Translation, made a long Time afterwards. What gave Occasion for them to think thus, was, that the *Latin* of *Scribonius* did not seem to them to come up to the Purity of that Language, which was still preserved in the Reign of *Claudius*. But *Rhodius* has prov'd, that these learned Men are mistaken, and that our *Scribonius* has all the Air of an Original, though the Language be not quite so pure as that of *Celsus*, who preceded him not long before; which only proves, according to *Rhodius*, that Men who live in the same Age speak not always with equal Purity of Style; and indeed, the whole Book shews that he wrote it in *Latin*; and in the Preface he makes his Acknowledgments to *Callistus* for presenting his *Latin* Medicinal Treatise to the Emperor. As to his Person, his Name shews that he was a *Roman*, and of the *Scribonian* Family, except it be suppos'd that he borrowed that Name from the same Family, in Imitation of other Strangers; but if this were the Case, he would have join'd his own proper Name to it. *Le Clerc*, *Histoire de la Médecine*. *Fabricii Biblioth. Græc.*

SCRIPTULUS. A Scruple; the same as SCRUPULUS.

SCROBICULUS CORDIS. The Pit of the Stomach.

SCROFFA. The same as SCROPHULA.

SCROLLUS. A River Fish, found in the *Danube*, somewhat smaller than the Perch. It is red on the Back, greenish on the Sides, with a Mixture of red Spots, and white on the Belly. It is esteem'd excellent Food, but is not used in Medicine. *Lemery des Drogues*.

SCROPHULA. The King's-Evil; from *Scrophæ*, a Swine; because this Animal is said to be much subject to such a Disorder.

*Quincy* remarks, that the Gout and the King's-Evil agree, in being frequent amongst Persons strong both in Body and Mind, who are hearty Feeders, and on other Accounts well and healthful; in this respect, however, considerably differing, that the Evil generally appears at three, four, or five Years of Age; and dries away by that State of Manhood that the Gout gives its first Warnings of approach; though neither of these are without some Latitude of Exception. And as the Gout is owing to sharp saline Humours, that are contracted by a particular Way of living, and favoured in their Accumulation by a peculiar Make of the Parts where they settle, upon the Declension of the natural Strength, so this Disease seems owing to a hot, sharp Humour, propagated a *Semine* from the Parent, in the first Formation discovering itself at an Age, when certain Glands are fitted for its Reception, and disappearing when the digestive Powers have arrived to their greatest Strength.

That Persons subject to the Evil do early shew an uncommon Vivacity of Mind, and Forwardness of Understanding, is a Fact that all have experienced who have been accustomed to such Opportunities of Observation; as, also, that if the Distemper goes on without much Interruption from its natural Course, and dries away about the Age of Manhood, as it commonly does, such Persons are generally strong, and free from Distempers afterwards.

That such a Humour can be derived from the Parent, is granted, perhaps, in more Instances than where it is really so, and is likely to be yielded by many, more on the score of a vulgar Opinion, than for any true Notions of the Manner how such a Thing is possible: It may be, therefore, necessary to form some rational Conceptions hereof, in order to judge what Disorders spring from such an Origin, and which not; because, without some Rules to determine by, Cases may be confounded and mistaken, from some Resemblance in their Appearance, which flow from very different Causes.

To this Purpose, then, I cannot see what we have to do with the Philosophy of the Microscope, so far as it asserts the Semen to be animated before Generation, because it seems not in any Manner to affect the Matter under Inquiry; but so far as we get any Knowledge of the sensible and manifest Properties of that small Portion of Matter, from whence we boast the Production of the finest Machines in the Creation, it appears to consist of a very subtle, active Salt, floating in a soft, balsamic Vehicle; whereas, therefore, we can conceive what Consequences to the Œconomy already formed, may flow from an Excess or Defect in the more active Prin-

ciple of such a Composition; so may we, by a Parity of Reason, conjecture, what must be the Result of every Deviation from the natural Standard in the same Principle before its Animation in the Matrix. Where, then, this Principle abounds with Heat and Pungency in the masculine Semen, it will not only irritate more frequently and more strongly to venereal Embraces, but carry with it the same Qualities into the impregnated Ovum; and, without some uncommon Interruption, or Contemperature from opposite Qualities, will encrease in the growing Fœtus, in Proportion to its Enlargement, and make a Part of that Constitution to which it gave Being, with the same Affections and Properties as it stood possessed of in the generating Semen.

Hence, it will be no difficult Thing to imagine what a Condition the Off-spring of such a Parent must be in; and how, sooner or later, in one or another Part, this primitive Matter may shew itself in a very troublesome, if not a very mischievous Manner, as the Circumstances of Life, and Strength of the Constitution encourage or obstruct its Excretion, and the peculiar Configuration of the Glands favour or resist its Accumulation and Lodgment: And though in the Case immediately under Enquiry, it principally shews itself from a little Time after Birth to a State of Manhood, is probable from this Reason, that sooner, it is not in Quantity enough to be discernable, or is hindered from Exertion by the Laxity of the Parts, and Viscidity of Humours, which is always more or less the Case of very young Children; but that when the Parts have got some Degree of Firmness, and have digested away the tough Humours, this hot, sharp Matter becomes sensible to the fine Strainers and Membranes as it passes in the Course of Circulation, and at last fixes upon them so as to occasion Pain, Inflammation, Swelling, and running Sores: But when, again, the Constitution takes another Turn, and arrives to its utmost Vigour, the digestive Powers become able either to destroy its Pungency by Attrition and Comminution, to detach it off by some natural Outlet, most commonly the Glands of the Skin, or to lessen it, so much at least, in Quantity, that it flows with the ordinary Current without sensible Effect, and never afterwards appears, but in giving to the generating Principle the same bad Taint from whence it derived its Existence: And that even frequent Coition and Propagation shall vent and draw off a great deal of this Matter, to the Benefit of the Parent, and Detriment of Posterity, is not only probable, but almost demonstrable; because, during that Time of Life, and in Proportion to such Indulgence, the Parent is always the most free from it, and that during the Travail of a Woman with Child, before subject to such Humours, or any of the like Kind, she shall be entirely free from it then, though, if the Issue survives the common Fate of Convulsions, a little more Age seldom fails to discover when such a Mother had her temporary Relief.

That the Distemper then under Consideration may be thus propagated, is not only out of Question from common Experience, but the Manner of it may in some measure be conceived from these Hints, and the Nature of the generating Matter. The same Way of Thinking, also, will suggest in what Circumstances a Person may fall into this Distemper without having it to charge upon Parents, or the Milk of a tainted Nurse, which, also, may possibly happen, tho', it is believed, very rarely; and that is from a Way of feeding, or any other Condition of living, that gives to the Mass of Humors an uncommon Heat and Sharpness, which in Time shall fix upon the same Parts, inflame and ulcerate them in the same Manner as that derived from a distemper'd Semen. And this will not appear at all strange to those who consider how many cutaneous Foulnesses, that are generally propagated by Infection, do sometimes derive their Origin from a Constitution thus disposed to generate the same Humour within itself, without any Infection; as what is ordinarily called the Itch, which is commonly got by Infection, does yet in some scorbutic Habits arise to the Height of that Distemper, so as to be in a Condition of infecting others, though it was generated *de novo* of itself.

The various Shapes and Appearances of this Distemper, as it is differently circumstanced in Proportion to the Quantities, Asperities, and other Aggravations of the Peccant Humours, with the Parts it settles upon, must be left to the Descriptions of Authors who have professedly wrote about it, it being sufficient to our Design here, to take Notice, that it is from a hot, sharp Humour, fitted to be deposited upon certain Glands, and affect them in the Manner as it is notoriously known to do.

But so far as from the principal Circumstances of this Distemper are suggested to us any Means of Cure, it is most obvious, that as the greatest Difficulty in getting rid of the morbid Humour which causes the Gout, is in its lying so far distant



distant in the Habit from the common Reach of Medicine, so this seems not quite so remote, but to flow mostly in the common Stream of the Blood, and to be immediately deposited by that upon the Parts affected, and most suited for its Reception. Besides, therefore, promoting Digestion, Commixtion and Transpiration, as, also, softening and smoothing the Acrerities of burning corrosive Humours, a constant well-chosen Course of Diuretics must necessarily be of great Service. And too many Instances we have, by Experience, of Cases that have been sufficiently laboured with Mercurials, and the ordinary official Alterants, without Success, that have afterwards been conquered by means seemingly much slighter, such as the Millepedes, and the common antiscorbutic Drinks, made principally with cooling and diuretic Herbs and Roots; no general Form of which can be contrived to suit every Patient and Circumstance, and must, therefore, be left to the Contrivance of a Physician, according to the particular Exigences of different Constitutions. As to that singular Way of Cure, whence this Distemper comes by the Name of the King's Evil, there is something in it so remote from all good Sense, since it can take place only on a deluded Imagination, that I think it justly banished with the Superstition and Bigotry that introduced it. *Quincy's Medicina Statica.*

The *Scrophula* or *Struma* is a hard glandulous Tumor, usually of the same Colour with the Skin, seated principally on the Sides of the Neck, about the Musculi Mastoidei, behind the Ears, and under the Chin; either more or less moveable, single of the conglobate Kind, or in Clusters of the conglomerate Kind; many Patients having been observed to have them contiguous from the Ear down to the Clavicle.

Though the principal Seat of this Disease is in the Sides of the Neck, scarcely any Part of the Body is exempted from it; and it affects either Glands, Muscles, Membranes, Tendons, Bones, or the Viscera.

The Glands are the most remarkable Seat of this Distemper, and whenever the outward Glands appear swelled, those of the Mesentery may be concluded to be so too, the Mesentery being usually the Part first attacked by this Malady.

In the Eyes it shews itself in a troublesome Ophthalmia, producing both the Anchylops and Ægylops; and in the Lids, the Epiphora and Lippitudo; sometimes the whole Ball of the Eye is thrust out by these glandulous Tumors. This Distemper appears in the Nose, by the Ozena; in the Lips, by the Labrifulcium, or thick pouting Tumor, especially of the upper Lip, with a Fissure in the middle; in the Throat, by the tumefied Tonsils; under the Tongue, by the Ranula; on the Wind-Pipe, by the Bronchocele; under the Chin, and on the Sides of the Neck, by the Struma, properly so called. It breaks out in the Groin and Arm-pits, and the Breasts too are subject to it. The Testicles and Prostates may be liable; but in these Cases another Distemper is generally suspected. The Strumous Matter is sometimes collected, like a gummy Substance, about the Muscles and Tendons, especially in the Fingers, Hands, Feet, and Toes; and the Elbows, Knees, and Ankles are often attacked in this manner. The fixed, immovable, white Swellings on the Joints, are the undoubted Offspring of this Distemper.

The Bones are often affected with this Distemper, not the Skull itself excepted; though the Bone swells, it appears externally hard and sound, but the Heart and Marrow may be entirely rotten; and this is called the Spina Ventosa. When a Strumous Tumor touches a Bone, it becomes carious. The Viscera too are often subject to these Tumors, which is not surprising, if we consider that most of the Viscera are supposed to be made up of Glands.

The Strumous Tumors of a round Figure are reckoned the mildest, which, as well as others, arise without Inflammation or Pain, and with moderate Hardness, but by Increase of Heat inflame and suppurate. Some of the mildest and biggest suppurate, without changing the Colour of the Skin, but in a few Days they renew their Hardness. When they suppurate with Inflammation, the Matter is mixed with Blood, and they are named Phlegmonoides; others are indurated and become scirrhus, yet sometimes fret, and grow painful and soft in their upper Part, which by some has been mistaken for a Suppuration, but at their Opening they only gleet, and often degenerate into a Cancer. Sometimes these Tumors are primigenial, as when the Disease is Original; and secondary when they succeed some other Distemper, as particularly a Fever, which often terminates in a Congestion of Matter. It, also, sometimes happens after Catarrhs, and other Distempers; and some proceed from sudden Fluxion, and others from long Congestion. The *Steatoma*, *Atheroma*, and *Meliceris*, as they are frequently Companions of, so they are often not easily distinguishable from, these Tumors.

When the Tumor affects a conglobate Gland, it is usually round, moderately hard, and moveable without Pain. Those

of an oval Figure, which are hard, and accompanied with Pain without Inflammation, are malignant; and if they grow unequal, threaten a Cancer. When the Tumor seizes a conglomerate Gland, the Shape of the Gland is usually preserved, especially when it is wholly affected; but sometimes they are oval, round or flat. In a Muscle the Shape of the Tumor is uncertain, and always distinct from the Muscle.

The Particulars to be considered in the Prognostic are, whether the Tumors be many or few; in Clusters, or more distinct; great, or small; deep, or superficial; moveable, or immovable; benign, or malignant; soft, or hard; the Situation, whether near great Vessels, Joints, Nerves, Tendons, or Bones; also, the Habit of the Body, and Age of the Patient.

If the Habit of Body be tolerable, the Patient young, the Strumæ recent, and but moderately hard, the Resolution and Suppuration may be easily effected; but if they have been of long Continuance, are hard and lie deep among the Vessels, the Work becomes difficult; yet the Cure of both is often promoted by accidental Ferments, which often either resolve or suppurate them. If the Strumæ be moveable and free from remarkable Vessels, the Extirpation is not difficult; but if the Habit of Body be bad, and the Strumæ immovable, they are not to be meddled with; if they be moveable, and yet lie deep among the great Vessels, the Extirpation is dangerous: Besides, in the best Habits of Body, new Strumæ are ready to rise while the old ones are extirpating.

If the Strumæ have been long ulcerated, and are become sinuous and virulent; and if they lie near one another, they often find a Communication to one another, though they appear distinct: In this Case the Lips grow callous, and the Ulcers corrosive, frequently sordid, and the Cure is not to be hoped as long as any one Cystis remains, or the Vessels that feed them; but if the Ulcerations be simple, the Cure is accordingly easy. Those who are seized with Strumæ in the Neck, after forty Years of Age, seldom recover, as they generally labour under great Obstructions, whence spring scorbutical Affections, Jaundice, Fainting, Vomiting, Loss of Appetite, sometimes a Dropsy; and sometimes a Cough, in which Case they die tabid.

If Strumous Tumors arise from Caries in the Bones of the Fingers or Hands, their Cure will require great Care; if in the Foot or Toes, it will be more difficult; if in the Os Calcis, Joint of the Ankle, or Astragalus, or in the Knee-Bones, and Ischia, or the like, where you can't lay open, or judge of the Caries, the Case is deplorable, the Work is long, and the very Discharge of Matter exhausts the Spirits of the Patients; so that they generally die of a Marasmus. But if, by Strength of Body and Help of Medicines, the Ulcer digests, sometimes the rotten Bones moulder and exfoliate, and by a *Callus* within, the Member is supplied.

If Strumous Tumors outwardly foul the Bones; if the Habit of Body be tolerably good, and the Ulcers well handled, they may recover: But if the Habit of Body be bad, new Ulcers arise; so that the Work is long and difficult.

#### THE METHOD OF CURE.

In the Cure, three Things are required.

1. A Regimen of Diet, and the other Non-naturals.
2. Pharmacy, or internal Prescriptions.
3. The Application of Externals, either to discuss, suppurate, or extirpate the Glands.

With respect to a Regimen of Diet, Regard ought to be had to the Constitution of the Patient, whether it be hot or cold, dry or moist, old or young, robust or delicate. If the Body be cold or moist, we generally suppose a Surfeit preceded, and Crudity to abound; in which Case, Abstinence from Meat and Drink, or at least great Moderation, is requisite. Their Diet ought to be moderately heating and drying, as Mutton, Kid, Rabbit, Pullet, Chicken, Partridge, Pheasant, Poltry, and the like, and these roasted; avoiding all Aliments which yield a gross phlegmatic Nourishment, such as Water-Fowl, Fish, especially those of Standing-Waters, Herbage, Cheese, all smoak'd, seasoned or dried Meats. Their Bread ought to be of Wheat, well-baked, and their Drink medicated Ale or Beer; Wine also is allowed, and Water utterly forbidden.

In hot and dry Constitutions tending to a Heëtic, we allow a Diet of a more humid Nature, their Meat being boiled with Lettice, Spinage, Purslane, Wood-Sorrel, and the like; to some of these we dare scarce permit the eating of any Flesh, but rather a Milk-Diet, or Asses Milk; though Milk will not be always found agreeable; in which Case we prescribe medicated Broths. Pork is, by some, forbidden Strumous People.

Air is a great Help to the Cure, which ought to be mild and gentle, in cold Weather heating and attenuating, and in the hot cooling. Exercise of Body ought to be enjoined, it being



being necessary to waste Superfluities. Sleeping in the Day is forbidden, unless where the Case is painful, to which it is an Anodyne. The Passions of the Mind ought to be moderated.

The internal Prescriptions must be qualified according to the Habit of the Body. If it be cold and phlegmatic, abounding with gross viscous Humors, the Prescriptions ought to be heating and attenuating. In plethoric Constitutions, the stronger Cathartics ought to be exhibited, or the milder often repeated. The Purgatives are, the Species Hieræ with Agaric, Diaturbeth, Pulvis Cornachini, Pilulæ Cochiae, & duobus, *Rudis*, de Hermodactylis, Alophanginæ, Imperiales, & Succino, Trochisci, Albandal, Diagrydium, Resina Jalapii, and Mercurius Dulcis, and all those Medicines prescribed in the Lues Venerea.

Alteratives are also usefully taken on those Days in which the Patient does not purge. Among these, a Decoction of the Woods claims a Pre-eminence; to which are added one or other of the Specifics, so called, such as the Roots of Fig-wort, Drop-wort, Devil's-bit, Soap-wort, Bur-dock; the Bark of the Walnut-tree; the Herbs, Rag-wort, Crane's-bill, Herb-Robert, the greater Celandine, Hound's-tongue, white Hore-hound, Fox-glove, and the like.

In these Decoctions, it is very common to put also a Lump of crude Antimony, of four Ounces or half a Pound Weight, grossly powdered and tied up in a Rag; a Specimen of which you have in Dr. Fuller's *Decoction Liberans*, and his *Decoction Edulcorans*; of a Diet, in his *Cerevisia ad Scrophulas*, and his *Decoction ad Scrophulas*.

For such as are not able to be at the Expence of these, or unwilling to be at the Trouble of preparing them, which must be continued for a long time, I have frequently ordered a Solution of Quick-Lime, one Pound, to a Gallon of Spring-Water; which being decanted, two or three Ounces of the Shavings of Sassafras Wood, with half an Ounce, or an Ounce of Liquorice Root sliced, may be steeped therein; these not only taking off the brackish Taste, and changing it for one more pleasant, but giving, likewise, a very agreeable Smell and Colour to the Solution.

As to the cold Infusion of several Drugs, prescribed by some Physicians, the Cost seems to be ill bestowed; the Water being before saturated with the Salts of the Lime, and the Woods too compact to yield any Virtue this Way, which require a Decoction of many Hours, with as many taken up in a preceding hot Infusion preparatory thereto: For which Cause, when I would have the Water more thoroughly medicated therewith, I either order them to be boiled in Lime-Water, somewhat weaker, prepared for the purpose; or having made the Decoction in Spring-Water, to each Quart thereof, half a Pint of the common Lime-Water may be added. And thus the Salts of the Lime have been found, perhaps, more beneficial than more pompous Forms of Remedies.

Besides these Liquors to be taken as a Diet, there are other Medicines, such as the diaphoretic Antimony, Bezoar Mineral, Æthiops Mineral, and Gum Guaiacum.

The Lapis Spongia, or Sponge-Stone, with Sponge itself calcined, Dr. Turner says, he has often experienced successfully, and relates the following Case.

A Countryman, about thirty Years of Age, presented himself to me for Advice, with both Sides of his Neck (where the Strumæ were placed *racematim*, as I may say) like a Bunch of Grapes, but more fitly compared to that of Turneps, with which extending forwards, the Larynx was so compressed as to endanger Suffocation. He had the like Glands upon the pectoral Muscles, about the Axillæ, with other ganglionide Tumors on his Arms and Wrists. Of a Case so pertinacious and inveterate I had little Hope; I prescribed him a Diet of the Woods, with some Antistrumatics; Purgation with Extract of *Rudis*, and *Mercurius Dulcis* between whites; also an alterative Eleetuary of Gum Guaiacum, Æthiops Mineral, Powder of Millepedes, made with the Conserve of Hips; together with a Roll of the Plaster of Frogs, with double the Quantity of Mercury, to be applied externally upon the Glands plasterwise, and renewed as there was Occasion; returning him back into the Country, where he had before undergone a copious Salivation for thirty Days; notwithstanding which the Distemper increased.

But growing weary of Method, he quickly after threw all aside; till meeting with one who had laboured under the like Malady, and had got his Cure by a Remedy, which required no Regimen, this Acquaintance procured from his Correspondent in Town some of the same for our Patient, being a large Gally Pot full of a dark or blackish Powder, out of which he took a Spoonful, Night and Morning, in a Draught of Beer; and finding his Kernels waste, he was encouraged to go on, especially considering how easy it was purchased; his Friend making no Secret of the Matter, but frankly telling him what it was. Upon which, that he might not be far-

ther troublesome, he desired a Relation he had here, according to the Direction given him, to buy a large Quantity of the most gritty and fabulous Spunges he could pick out, which drying in an Oven he reduced to Powder; and having continued taking the same for about three Months, the Glands were all dispersed, and his Distemper vanquished; so that being in Town about some Business at the Year's End, I saw him with a smooth Neck, scarce a Vestige of the Disorder remaining, having, as he expressed himself, *Piss'd away the King's Evil*.

Somewhat related to this, adds Turner, is the *Pulvis ad Strumas* of Dr. Bates, prepared of Lapis Spongia, three Parts; Sal Gem, two Parts; and vitriolated Tartar, one Part; which I have seen beneficial, also, in some Cases. But whoever thinks that by this he has got an infallible Medicine, will find himself mistaken. *Grulungius* prescribes it thus:

Take of Sponge, Sponge-stone, and Pumice stone, each equal Parts; let them be calcined, and take a Dram for a Dose, twice a Day, with a Diet-Drink.

In another Part of his Writings I find it thus:

Take of Sal Pumicis, half a Scruple; Sal Gem, two Scruples; Salt of Tartar, one Scruple; mix and make them into a Powder. Let it be given in Wine, or Aqua Scrophulariæ, beginning when the Moon decreases, and continuing to the Change.

For the same Purpose in another, I find this:

Take of the Powder of the Root of the Gladiolus, half a Dram; let it be taken in a Spoonful of the Syrup of Violets, every Morning, for a Month.

If the Patient be of a hot and dry Constitution, the Case is more difficult, because the Medicines eminent in the Cure of this Disease, are generally such as are like to injure the Body in one of these Qualities, being most of them such as either heat, or at least dry it; many of them do both, as *Sarsa*, and the Woods; as, also, the Cineres Spongiæ, Sal Gem, and all the Species. In this Case the Waters will have their Place, though *Wiseman* does not so particularly approve them as others do. Asses Milk is of great Efficacy in this Case; and where Asses Milk does not agree, distilled Milk may be prescribed: Also, Decoctions of *Sarsa*, China, Mastich Wood, white Sanders, and Shavings of Harts-Horn and Ivory, with the more temperate Pectorals and opening Roots. Purgings, in this Case, if the Body requires it, ought to be with Lenitives; and to Children, the Infusion of Rhubarb is sufficient. Emulsions, Pearl Julaps, and Opiates, are, also, beneficial. *Wiseman*, also, directs the testaceous Powders; but Turner says, that by Reason of their Grit, or exceeding Hardness, unless very finely levigated, I should suspect their Passage through the Lacteals; or passing, their being coacervated in the mesenteric Glands; as I remember once to have found them in a strumous, tabid Patient upon Dissection, who had taken great Quantities of them.

I have, therefore, a better Opinion of the Millepedes, which are usefully prescribed, not only in these Infarctions, but for attenuating, absterging, or cleansing all mucilaginous and tartarous Concretions upon the Viscera, which they precipitate by Urine.

The Method of prescribing them, is after they are washed and dried, to bake them in an Oven, and reduce them into Powder, which is given from a Scruple to half a Dram, in any convenient Vehicle, such as white Wine; but their Infusion alive in white Wine, and taking the Expression is much preferable. Thus two, or two and a half Ounces of the live Millepedes, may be steeped in a Pint of good white Wine, and two or three Spoonfuls of the Expression given for a Dose twice a Day. Or twenty may be swallowed at a Time, an easy Task to many, whereby their volatile Parts are preserved; which may be impaired, if not destroyed, by the Heat of the Oven.

The third Intention is performed by the Application of Externals, 1. To the Tumors which we endeavour to resolve, or suppurate, or to extirpate. 2. To the Ulcers which are the Effect either of Suppuration or Extirpation. In Tumors we shall begin with Emollients and Discutients, though it is no easy Work to resolve these Glands, if we consider the Stubborness of the Matter, and its being contained within a Cystis; yet in some soft delicate Bodies the milder Sort of Glands, which are not too much indurated, frequently resolve. The *Emplastrum de Ranis cum Mercurio* is frequently applied for this End, as also that of the Gums, *Ammanniacum*, *Gallbanum*, *Bellinum*, to which crude Mercury may be added, as it is in the New Dispensatory. Some near

Form.



Forms of which are to be met with in Dr. Fuller's *Emplastrum Antimoniale*, and the *Linimentum de Bryonia*, prescribed for the same Purpose; as also in Bates's *Emplastrum ad Strumas*, and *Diagalbanum*, with his *Unguentum Digitalis*.

*Zacutus de Prax. Admirabile*, Vol. II. Lib. I. Obs. 101. says he never used the following Ointment without Success.

Take of the Root of Great Bryony, plump and round, half a Pound; cut it into small Pieces, and fry it with three Pounds of recent Olive Oil, till they become dry and wasted; strain it, and add of Turpentine of Fir, half a Pound; Yellow Wax, five Ounces; remove it from the Fire, and make it into a viscid Ointment.

The Herb Goose-grass or Clivers, beat up with Lard, and the Strumæ therewith anointed, discusses the same, while the distilled Water of the whole Plant lends farther Assistance. The Root of Smallage is recommended by Mr. Ray for the like Use. *Crollius* as highly extols the Lesser Celandine or Pilewort, whose Roots, he says, are a Kind of Specific in this Disorder. An Ointment prepar'd of these Roots is directed thus.

Take of the Root of the Lesser Celandine, cleaned and bruised, and Hogs Lard, each a Quantity at Discretion; let them be pounded and boiled together, till the Roots become dry; repeat this Operation twice, till the Lard is well impregnated with the Roots; and thus you have an excellent Ointment.

*Etmuller* and Mr. Ray recommend the *Pulvis Cyani*, or Tincture of its Flowers; others, the *Radix Cynoglossi*, or Root of Hound's-Tongue, drinking the Decoction of it, and applying it outwardly in Cataplasms. But the *Folium Digitalis*, or Leaf of Fox-Glove, pounded and applied to the Strumæ, or the Ointment of its Juice, is highly esteemed by the Botanists. Dr. Bates's Preparation of this Ointment stands thus.

Take of May Butter, three Pounds; fresh Leaves of Fox-glove, bruised, as much as you can mix with the Butter; expose them to the Sun thirty Days; then boil them till the Leaves become curled, and let a strong Expression be made.

This seems to be the same used by Mr. *Wifeman*, which he calls the *Valentia Digitalis*, having undergone a repeated Infusion of fresh Leaves, by which the same is farther impregnated with the Virtues of the Plant. *Helmont* praises the spongy or hairy Excrecence, growing out of the Canker-Rose, the Powder being taken to half a Dram mixed with Sugar.

The *Radix Rufci*, or Root of Butcher's Broom, in fine Powder, given to a Dram every Morning in White-wine, especially if an equal Proportion of those of *Flupendula* or *Scrophularia* be added, and administered in the like Dose, is praised by *Etmuller*, as is the Rue leaved Whitlow-Grass by Mr. Boyle. *Arnoldus Villanovanus* says, that the fresh Root of *Scrophularia*, eaten for ten Mornings fasting, certainly cures the King's-Evil.

When the Glands discuss not, but begin to enflame, a Suppuration will be the Consequence; to promote which, let the stronger emollient Suppuratives be applied, as the Roots of white Lillies, Bryony, Marshmallows, Sow-bread, wild Cucumbers, to which may be added, fat Figs, and Pigeons Dung; and if the Progress be very slow, for stirring up the sluggish Humour, and rousing its Heat, the Root of *Pellitory of Spain*, and the Seeds of *Staves-acre* and Mustard. To promote the Suppuration, it is, also, common to pinch them hard; and some People in the Country thrust a Thorn into them, which excites Inflammation, and disposes them to suppurate. Care must be taken to endeavour a perfect Concoction; for if they are opened while any Part of the Gland is hard, it will encrease, and occasion a Necessity of eradicating it, or of leaving the Cure imperfect.

With regard to the Manner of opening them when suppurated, that by Incision makes the least Scar; but if the Struma be large, the Caustic may give a larger Opening with less Pain: The Matter being discharg'd, you may deterge with *Paracelsus's* mundificative, precipitate, and the *Vitriol Stone*; and afterwards incarn and cicatrise.

But in old and hard Strumæ, we seldom obtain a complete Suppuration: Sometimes, during the Application of the most subtil Discutients, we raise a Heat in the Skin, which affecting the Cystis, and Part of the Gland next under it, causes an imperfect Suppuration; by the continued Use of

the Discutients it at length frets its Way in small Apertures, which, if the Applications are continued, grow bigger, and become so many painful Ulcers, spreading one into another, the Body of the Gland remaining hard, without Hopes of Suppuration. But if you dress them one, two, or three Days with a Pledgt of *Unguentum Basilicon*, you may qualify the Heat, and moderate the Ulceration; and so by interchangeably applying the Discutient or Lenient, you may happily waste the whole Gland, if the Patient be treated with proper Internals. Sometimes the Strumæ protrude in a Fungus, and may be thrust quite out by passing a Spatula under them, and the Ulcer may be healed in a few Days: Where they are incapable of being so thrown out, the protuberant Part may be cut off, and the remaining Basis consumed with Echarotics.

If the Struma be movable, and free from remarkable Vessels, the speediest Way of Cure is by cutting the Skin, and taking them out whole with their Cystis: Those which have Stalks, and are pendent, or grow small near the Basis, may be tied and cut off. In those which are so thick in the Basis, that you cannot make Deligation on them, you may pass a proportionable big Needle under the Roots of them, and cut them off under the Needle.

The common Way of taking out all the Species of Strumæ, Atheromata and Meliceris, by Incision, is in cutting the Skin the Length of the Tumor; and the Incision should be made warily, lest the Cystis should be divided, and the Matter flow forth. After they are separated round to the Basis, it may be sometimes necessary to make a Ligature upon the Vessels, before they are cut off. Those which are very large, with a proportional Basis, as Steatomata, generally called Wens, are sometimes taken out by making a crucial Incision, and sometimes by an oval one, taking off so much of the Skin as may be judged superfluous; then separate it with great Caution, because the Skin commonly adheres so close to the Cystis, that they cannot be divided without the Help of the Knife: Having separated it, turn it out, and make a Ligature underneath upon the Vessels, and cut it off; then bring the Lips of the Wound together, with two or three Stitches, and dress it up in a proper Manner. Some Empiricks cut them off without more ado, scarce making a Ligature on them: But this Way being always attended with a Flux of Blood, others chuse rather to pass a Seton-Needle with a strong Ligature close under the Basis, or as near as it may be, and that way make a Ligature strictly about it. Sometimes we make the like Ligature without Incision, and are content to eat off the Tumor by straitening it; thus it falls off without Effusion of Blood; but there is great Danger of mortifying the sound Parts underneath, or of causing such a Disturbance as prolongs the Cure. Therefore, it may be more proper in great Steatomas and complicated Tumors, which are inclosed in Cystises, rather to cut the Cystis, and with the Hands pull out the preternatural Body, leaving the Cystis behind. The Cystis will, by Digestion, separate and cast off, and the Wound will, also, heal by Agglutination, if the superfluous Skin be cut off, and the remaining Lips brought together.

After the same Manner may all those Tubercles in the Eyebrows and Face be treated, where the Cystis separates difficultly from the circumjacent Parts, or where a great Scar may be unseemly.

Where the Strumæ are large or lie deep near considerable Vessels, there, if Extirpation be safe, the best Way will be by Caustics and Echarotics. To prepare the Patient for this Operation, the Body ought to be purged frequently, and, if the Constitution be plethoric, Bleeding may be necessary; also, during the Extirpation they ought to be under an antistrumatal Course of Physic, with Alteratives; otherwise new Glands will arise while you are eradicating the old; upon which Consideration, you are to furnish yourself with such Echarotics as may penetrate deep into the Gland, and do their Work with least Pain.

In eradicating the Strumæ, we are sometimes necessitated, upon the accidental Erosion of an Artery, to apply the strongest Echarotics; but generally we qualify them according to the Habit of Body, Age and Strength of the Patient, and Condition of the Glands, as they are hard or soft, have more or less Sense, or are seated in or near an Emundlory. Those Compositions which have Sublimate in them, are exceedingly painful, scarce to be endured in the strongest Bodies; and though they be taken off in five or six Hours Time, yet the Salts having once penetrated the Glands, the Pain will continue vehement many Hours after, and affect the neighbouring Parts with great Inflammation and Tumor, frequently raising new Glands. When these Compositions are applied to the softer Sex, or tender Bodies, it affects the Head with violent Pain, benumbing that Side



and the circumjacent Parts, and depriving them of their Senses. Fainting, and Palpitation of the Heart, are frequent Effects of such Escharotics.

The Method I usually begin this Work with, is by the Application of such a Caustic as will least spread, making it proportionably long, reaching from the lowest Part of the Gland upward; for in consuming, the Strumæ will sink downwards. The Sides must be defended with Plaisters, to prevent it from spreading; for the Lips being once divided, they will give way, and accordingly as your Escharotics penetrate into the Body of the Gland, the Sides of it will fall in, and be eradicated out of the narrowest Opening you can make; and the narrower it is, the less Blemish will arise from the Cicatrix, and the sooner it will be cured. The Eschar being made, you may divide it the whole Length, and with a caustic Stone rub into it till it hath penetrated into the Body of the Gland, which it will the sooner do, if interchangeably you press into the same Place with a Stick dipped in Oil of Vitriol. Having thus done, dress it up with Unguentum Basilicon, with Lint-seed Oil hot, embrocating the Parts with Oil of Roses, and with Vinegar, and apply a Plaister of Bole over all. This Way of dressing is not without Pain, but it seldom lasts above half an Hour. The third Day after you may dress again, and if you find the Eschar in the Middle dried hard, dress it with Lenients, but if it feel soft, rub it again interchangeably with the caustic Stone and Oil of Vitriol, thrusting them every Way into the Body of the Glands, taking Care that the Lips of the Ulcers be not enlarged thereby. By this Way of proceeding, a great Part of the Struma will be eradicated, before the first Eschar in the Circumference cast off from the Skin. Having thus near eradicated the Struma, you may consume the Remainder with precipitate Mercury, and keep it open with Dossils of Lint, permitting the Ulcer to contract narrower the while, that it may heal with a Cicatrix. This I conclude the easiest and speediest Way to eradicate the largest Struma; but in these complicated Strumæ, and others which will not admit of such Proceeding, I apply an Escharotic, or the strongest cathartic Powders, as I see Cause. The Steatoma being Suet, yields not to Escharotics.

Hitherto we have treated only of the King's-Evil as it is contained in a Cyllis, being the *Struma* of the Antients; but as in the History of the Disease, we enlarged its Bounds further, we shall proceed to the other Species there mentioned, which cannot be reduced to the Method here proposed. As to the *Strumæ*, and other preternatural Tumors included in a Cyllis, affecting the Muscles, Tendons, Ligaments, and other Parts of the Body, they differ not in the Way of Cure from what has been already delivered, except that they require more Caution in the Extirpation of them, as they affect the Joints, or sensible Parts.

The Gumminess upon the Muscles and Tendons, require emollient and discutient Dressings.

The Swellings affecting the Joints in this Disease are of two Sorts, both made by Congestion, and increase gradually; yet differ, in that the one arises externally upon the Tendons, and between them and the Skin, or between them and the Bone; the other internally, within the Bone itself.

That which arises externally affects the Ligaments and Tendons first, and sometimes relaxes them to such a Degree, that the Heads of the Joints frequently separate from one another, and the Member emaciates and grows useless. But for the most Part, the Humours over-moistening the Ligaments and Tendons, produces a Weakness and Uneasiness in the Joint, raising a Tumor externally, and, in its progress, the Membranes and Bones are corroded by the Humour.

Particular Care must be taken, not to be deceived in taking the Case either for a Dislocation or some common Abscess, for fear of undoing the Patient with rough Usage, under Pretence of setting a Bone that was never out; or, by treating it with Maturatives, of making Work for a fistulous Ulcer with foul Bones, which will never alter be in your Power to heal up again. As a farther Guide in the Way of Diagnosis, if the Tumor be of the stumous Kind, arising more especially from an internal Cause, there are usually some of the other Symptoms attending, as sore Eyes, swelled Lips, Glands about the Neck, or under the Chin, or the Parents have been subject to the same Distemper, and entail'd it thus upon their Issue. But if its Rise were first of all from some Strain or Bruise, the greater Caution is requir'd in forming a right Judgment.

In order to the Cure, apply, in the Beginning of the Fluxion, astringent and drying Plaisters, as of red Lead, and Bole, with moderate Bandage, and place the Member in such a Position as may prevent the Descent of Humours. If Blood abound, a Vein may be opened; but this

Humour requires purging with Calomel, &c. and Alteration by specific Decoctions, diaphoretic Antimony, Bezoar mineral and the like. In the Decline of the Fluxion, strengthen the Joints with Fomentations, and Plaisters of a discutient and astringent Quality, Tops of St. John's Wort, Centaury, Wormwood, Marjoram, and Betony, Flowers of Sage, Rosemary, Red-roses, Balauftines, Cypress Nuts, Myrtle and Juniper Berries, &c. in Wine, with the Addition of Brandy and the Emplastrum de Sandice. But if, through want of such Treatment, they grow excessively swelled, and the Humour incapable of being pressed back or discussed, you may suspect the Bones to be corroded; for that Swelling is mostly raised by a Hyperfarcosis within, and ought not to be opened without a Prediction of a Caries; for, however it may, by a seeming Fluctuation, be thought to have Matter, yet, upon opening, it will only discharge a Gleet, and the Hyperfarcosis will thrust out in a Fungus. If in some particular Part a Suppuration visibly appears, and upon Aperture an albuginous Matter is discharged, you may conclude the Bone under it is rotten, especially if it be in the Hand or Foot; and the longer you delay the Opening, the more rotten the Bones will be.

Therefore, in such Cases, having foretold the Patient or his Friends of the Danger, give vent to the Matter proportionably large (according to the Rectitude of the Vessels) to the Bone, and proceed to the Cure as in Ulcers with Caries, being careful to keep the Member in a right Position, that the Joint above it do not contract, as it frequently happens in the Elbow, Knees and Hip. It sometimes happens, that these Diseased Creatures fall into the Hands of Pretenders to Surgery, who, by improper Applications, raise great Tumors; and not knowing how to dress them, suffer the Aperture to be filled up, and overgrown with luxurious Flesh till the Bone rot underneath. Others, when consulted in such Cases, although they know the Bones to be carious underneath that Hyperfarcosis, advise the leaving them to Nature, persuading their Patients, that it is the Work of Time, and that the Assistance of Surgery will but increase the Malady. But as one rotten Bone cannot cast off another, they may well rot in Pieces; and till the Hyperfarcosis be removed, and the Bones laid bare, nothing can be expected but Apostumations one after another, and the Patient will at length die hectic. It is proper, therefore, to consume the Hyperfarcosis by such Applications as the Strength of the Patient can bear, making way for the Bone or Bones; pull out such as are loose, and dispose the others to exfoliate; then by Compress and Bandage press out the Matter, and endeavour to restore the Part to its natural Smallness; and for this Purpose, the Ulcer must be well deterged, and the native Heat cherished by discutient and drying Fomentations. The Compresses under the Bandage ought, also, to be pressed out of a Solution of Salt of Nitre, &c. in Vinegar. By this Method you may happily cure them, if Internals be prescribed, with Regulation of Diet.

The other Sort of Abscesses, which take their Beginning from an Ulcer in the Bone, have been already mentioned under the Name of *Spina Ventosa*. This Disorder arises from a morbid State in the medullary Juice, which corroding the Fibres, makes a Solution of Continuity there, corrupts the interior Part of the Bone, and at last (if not prevented) corrodes the Shell, and passes its subtle Humour through some Perosity it had made.

This Disease of the interior Part, by Degrees, usually so affects the external Shell of the Bone, as to raise it to a preternatural Tumor, which at the same Time over-stretching the Periostum, causes an Uneasiness; and this Pain, if it grow so acute as to produce Inflammation, an Abscess consequently follows.

If the Bone be spongy, and is soft, it is wonderful to see how quickly the Fibres of it will be mollified, and prepared for a sudden Distention, as if the Part were rather muscular than osseous. So in Childrens Fingers I have seen a Bone swelled in a Night; and the like Tumor raised in the spongy Bones of Adults, in a few Days, and without much Difficulty yield again to exsiccant Remedies.

It sometimes happens, that the interior Part of the Bone is totally corrupted, without any external Tumefaction or Pains, till the acid Humour makes its Way through the Cortex, and corroding the Periosteum, causes a Solution of Continuity there; which, by Access of Pain, swells and inflames the external Parts, and produces Maturation in a few Days. Those the protuberating Bones, also, frequently raise Abscesses after the same Manner, and sometimes when the exterior Parts suffer under another Ulcer, different from this.

In some Species of this Disease, there is a sudden Tumor raised in a Night; in others it swells gradually, and never corrupts externally. In others, the Humour pierces through



the Cortex, and raises suddenly an Abscess. And these Differences may be said to arise, somewhat, from the Place or Bone they affect; for, accordingly as the interior Part of it is softer or harder, or the external Cortex is solid or porous, so it suffers Solution sooner or later. Those of the Cranium, for the most Part, pass their Way through the interior Lamina, and affect the *Dura Mater*, &c. producing great Pains, Convulsions, Spasms, Epilepsies, and they die before the Disease is discovered. In the great Bones of the Knees, Ancles, Elbows, &c. they pass their Matter slowly, and are more generally diseased with Apostemations, externally arising from the Protuberance of them. In the *Os Tali*, or Heel bone, which is spongy within, and full of external Pores, they make their Way through, more suddenly, and so they do in the Jaws, Fingers and Toes.

The most visible Signs of the *Spina Ventosa*, are a Protuberance of the Bones, without discolouring the Skin, and often without Tumor or Pain.

The Apostemations proceeding from the *Spina Ventosa*, most certainly shew them, rising always between the Membranes and Tendons; and somewhat a Fluctuation may be felt there before the external Skin be considerably inflamed; also, if upon opening it search be made with a Probe, it will penetrate deep into the Bone, yet is the Cortex of it white; whereas the other Abscesses always begin externally; and if the Bone be bare, yet is it only superficially carious, or stained by the Matter.

The Cure of the *Spina Ventosa*, in the lesser Bones, is possible; but those in the bigger Bones are for the most part deplorable. Infants and Children are generally the Subjects of this Disease.

In the Cure of these, the same Method is required which has been above proposed in those Abscesses, and Ulcers with Caries; as, also, the same Regulation in Diet, and other Non-naturals.

The Topics ought in the Beginning to be such as are astringent and drying, as the Plaister e Bolo, Cæsaris, of simple Red-lead, &c. with Soap de Sandice, and of Frogs, with double Mercury, with good Bandage.

If afterwards they press their Matter externally, they must be laid open by Incision, according to the Length of the Protuberance. Those of the Cranium are not much protuberant, from the Reasons given; yet you ought to make Inspection, and proceed accordingly, by Rugine, or Trepan, as the Symptoms indicate. Those of the Jaws are visible, and require Vent by the Extraction of the Teeth, after which the Caries must be consumed by Medicines of a drying Quality, of which the Actual Cautery is the most speedy and effectual. Those of the Fingers and Toes are to be laid open by Incision, in case of Apostemation, the Length of the Protuberance, and the Bone cut into, and the Caries dried up. The Ulcers in the greater Bones ought, also, to be opened, that the Matter may be discharged, and the Bone laid bare in order to Exfoliation, if it be possible. But if the interior Part be much corrupted, your best Way will be to keep that Part of the Ulcer dilated, which lies over the Aperture in the Bone, by some Dressing dipped in Spirit of Wine, or the like, healing the rest of the Ulcer, and prescribing such Internals as may dispose the Body to a better Habit; for these only are the carious Bones which we may leave to Time, it being in vain to attempt the Exfoliation of great Bones, where the Rottenness, as in a Pear, beginning at the Core, hath consumed the Substance of them. See *Os*.

#### OF THE STRUMOUS OPHTHALMIA.

This Species of sore Eye takes its Beginning from vicious Humours inflaming the *Tunica Adnata*, which increasing, sometimes affects the other Tunics with great Pain, Tension, and Pulsation, whence Pustules arise and suppurate, terminating for the most Part in Ulcers, which leave hard Cicatrices, and, by reason of the sharp Desfluxion falling upon the Edges of the Eye-lids, make a Blearedness; and therefore these Inflammations are in *Latin* called *Lippitudo*.

The Causes are the same with those of the *King's-Evil*; yet it may be more particularly imputed to Abundance of Humidity repleting the Head, and descending to the weak Eyes.

An Ophthalmia is supposed to be strumous, when it has been of long Continuance, arising without manifest Cause, and yielding not to the common Remedies of Bleeding, Blistering, Purging, with the Anodyne Collyria, vulgarly prescribed. It is known to be so, when it is periodical, and accompanied with strumous Swellings in the Neck, a thick chapt upper Lip, an Ozæna, a crusty, scabby Nostril, and the like.

If the Ophthalmia be from Plenitude, the Face is high-coloured, the Eye-lids somewhat swelled and inflamed, the capillary Veins large and full; yet the Humours are not so liable to fret as in other Cases, nor is the Pain extremely vehement. If the Disease be from Choler, the Visage is not red; but the Pain is sharper, and with Excoriation of the Eye-lids. If it proceed from pituitous Humours, all the before-mentioned Symptoms of Inflammation, Pain, &c. are more remiss, and the lacrymal Humours are not corroding, unless there be a Mixture of saline Humour joined with it. Whether an Ophthalmia can arise from Melancholy, may be doubted; but if it do, there is a small Fluctuation or Pain. That proceeding from the King's-Evil is of an acid Quality, with sharp Fluctuation and Pain; the Eyes are, also, more subject to be gummed together with a viscous Humour, than they are in those from the aforesaid Causes. Whether the Humours affecting the Eyes, flow from the external or internal Vessels, may be discerned from their Complaint: For, if they flow from the Pericranium, &c. the Pain, Pulsation, with Heat in their Forehead and Temples, will demonstrate it; but if the contrary, the Pain will be more intense, and deeper within amongst the Membranes; there will be, also, an Itching in the Palate and Nostrils, with frequent sneezing.

The Time of the Inflammation ought also, to be considered, in order to the Cure, and is thus discerned: In the Beginning, the Eyes look red, and the Humours distilling upon them are thin: In the Increase, the Heat and Pain are augmented; in this State, the Inflammation and Pain are great, and the Humours thicken, and gum the Lids together, especially in the Night: In the Declination, the Fluxion, Pain, &c. visibly diminish.

The strumous Ophthalmia is of most difficult Cure, and in Children very vexatious, by reason of the Humidity they abound with; also, because of their Frowardness, and Incapacity of taking proper Remedies, or admitting external Applications; and, in consideration of the Laxity of their Eyes, they are subject to relapse upon every little Disorder. Those arising by Consent from the internal Parts, the *Dura Mater*, &c. are subject to more grievous Symptoms than those which proceed from the Pericranium, and other external Parts.

If in an Ophthalmia the Pain, &c. persevere any long Time, there is Danger that the Tunics of the Eye may be corroded; and if the Cornea happen to have been long ulcerated, a Blindness follows, or at least a Dimness of Sight, by reason of a Condensation of a gross Matter about the Pupil.

In order to the Cure, the Diet ought to be of Meat of easy Digestion, with great Moderation, avoiding all sharp, salt, hot, or spicy Meats, and such as may beget Crudities. In the Beginning of the Disease, Wine is forbidden: Hydromel is allowed; but in hot, bilious Desfluxions, a Decoction of Barley, with a small Quantity of Cinnamon-Water, is only permitted. The Air ought to be pure and temperate; that which is windy, dusty or smoaky, being offensive to the Eyes: So is Sun-shine; therefore, a Piece of Silk, or Linnen, should be put before the Eyes, commonly a Piece of green Sarsenet. Exercise of every Kind is forbidden, and Quiet enjoined. Sleep in these Diseases is necessary, when it can be obtained, the Eyes enjoying Quiet the while, which mightily conduces to their Recovery.

The same Antistrumatics are to be directed as were mentioned before, for the Disease in general; unless, that in Place of the hotter Cathartics, the more lenient and gentle Purgation is by some preferred, giving Calomel over Night, and purging it off therewith next Day, or the Day after; repeating the same once, if not twice a Week; remembering that on the purging Days, especially if the stronger have been administered, some gentle Anodyne be given at Night, as half an Ounce, or six Drams of *Syrupus e Meconio*, in one or two Ounces of the Water of Cowslip Flowers, or the Water of white Poppies. On the intermediate Days, the Expression of Millepides may be given, as above directed.

Revulsion and Derivation is necessary, by cupping on the Neck and Shoulders, bleeding with the Lancet in the Arm and Jugulars, or with Leeches at the Temples, or behind the Ears. Shaving the Head, Blistering, Issues and Setons, are of frequent Use; but Issues in the Neck often cause Strume to arise thereabouts, and therefore some prescribe them behind the Ears. In the declining of the Ophthalmia, and after general Evacuation and Diversion of the Humours, bathing the Body in luke-warm Water will be found of great Advantage in contemporating hot, sharp Humours, if the Season of the Year, and the Age of the Patient will permit.



In the Application of external Remedies to the Eyes, we ought not to be too hasty; for the mildest Medicines dropped into them, prove generally offensive in the Beginning of Inflammation. Authors do not agree on the set Time when we should begin our Applications to the Eyes; but all of them concur in proceeding first with general Evacuation and Diversion of the Humour, and afterwards, suppose about the third Day, to use Collyria. The Ingredients mixed with Collyria, ought to be well washed, that they may be without Acrimony, and so finely powdered that they be not the least gritty. The Decoctions also ought to be cleanly made; and in dressing the Eyes, special Care ought to be taken in cleansing them and their Lids of viscous Matter, to which Purpose an Eye-cup is most necessary.

In the Use of external Remedies, it must be considered, whether the Disease be in its Beginning, State, or Declination. For let the Empyrics boast of this or that universal Collyrium, they cannot cure these Ophthalmias with any one particular Medicine; for, in the Beginning of the Inflammation, they require Repellents; in the Increase, somewhat of Resolvents ought to be mixed with them; in the State, they ought to be treated with Resolvents of a digestive Quality; and in the Declination with Resolvents and Deterfives of an esiccant Quality.

Thus, in the Beginning, all Epithems or Collyria are to be moderately repercutient, as the Waters of Roses, Plantane, Frogs-Spawn, with the Water beat up with the White of Eggs. To these are added the Lapis Tutie and Calaminaris, or the Sief Album Rhalis.

In the Increase, Resolvents should be mixed with the former; among these are reckoned the Waters of Eye-bright, Celandine, Fennel, with the Mucilages of Linseed, and the Seeds of Fenugreek and Marsh-Mallows. To which, in the State, are added the Gum Sarcocolla, moistened with Breast-milk, as more powerfully digesting than some others. Again, in the Declension, Resolvents with Restrictants.

When great Pain attends the Fluxion, some mild and anodyne Collyria are most convenient; such are the Mucilages of the Seeds of Mallows, Flea-wort, and Quinces, extracted in Poppy-Water, also Womens Milk dropped from the Breast into the Eyes, and Pidgeons Blood instilled into the Eyes. Likewise, the Mucilages of the Seeds of Poppy and Henbane, extracted in Rose-Water, to any of which may be added, in extreme Pain, a few Grains of Opium. When there is great Heat, Itching, and Redness, add half a Scruple of Sugar of Lead, to two or three Ounces of the Collyria, with one, two, or three Grains of white Vitriol.

During the Use of these Remedies, Intercipients may be applied to the Temples, as Gum Mastich, or Tacamahacca, with a few Grains of Opium and Camphire, melted and spread upon a circular Piece of thin Leather.

Epithems, or frontal Defensives may, also, be laid to the Forehead, of true Bole, Dragons-Blood, Frankincense, with Whites of Eggs, Vinegar of Roses, and Farina Volatilis, [or the fine Flower that flies off in dressing Corn]; or the Whites of Eggs beat up with Rock-Allum. Which last Sort are to be frequently renewed, as they grow stiff and dry.

Instead of these, more especially over the Eye-lids, may be applied Cataplasms of the Pulp of four Apples, roasted under the Ashes, mixed with any of the above Mucilages; or a Decoction of the Leaves of red Roses, and Flowers of Elder, with the Addition of Crums of White Bread, the Yolk of an Egg, and a little Saffron.

A Fomentation of the same Decoction may be farther serviceable to resolve the Tumor, and give a Breathing to the impacted Humor, if judiciously prescribed. Where the Cilia, or Eye-lashes, are subject to be glued together, as commonly happens after Sleep, let them be lightly smeared with a Feather, dipped in the Unguentum Tutie, upon going to Rest.

While these Topics are applied, some other Internals are to be prescribed, which from their supposed Faculty of strengthening the Sight, are named Oxydoreica; some Forms of which you may meet with in the Cerevisia Oxydoreica, Pulvis Cibarius, Pulvis Ophthalmicus, and the Electuarium Oxydoreicum of Dr. Bate. What specific Virtue is in the Euphrasia, the Basis of these Compositions is uncertain; but the Millepedes ought to be mixed with them, or added to the other Ingredients. And indeed, if the Ophthalmia be strumous, the other Alteratives before recited seem preferable.

If there should happen any Danger to the Sight, by a Speck or Suffusion on the Pupil, some gentle Deterfiv may be dropped in, as a Collyrium prepared of white Sugar-candy, with some Grains of Sal-Ammoniac, or white Vitriol, dissolved in the Water of Fennel, Oats, Eye-bright, or Celandine. The Juice, also, of those Plants are often mixed with Honey, and made into a Liniment, or with the fine Powders of Myrrh and Aloes, also the Water distilled from Honey is recommended for these Uses.

The subtle Powder of Crocus Metallorum, infused for some Days in one of the abovenamed Waters, half a Dram or a Dram to two Ounces of the Water, which must be poured off clear at the Time of Use, has excellent Effects in this Case. But there are many Compositions for this End; some proper Forms you will meet with in the Collyrium Ammoniacum, Collyrium de Succis, and the Collyricum Vitriolicum of Dr. Fuller, and a very celebrated one in the Aqua Ophthalmica Sappharina of Dr. Bate. For the EPIPHORA see CATARRHUS.

#### OF THE STRUMOUS ÆGILOPS.

Ægilops is a Tubercle in the inner Canthus of the Eye, either scrophulous, atheromatous, or of the Nature of a Meliceris, or sometimes with Inflammation. The Greeks call it Ancylops when not ulcerated; and Ægilops when it is. In which latter Case it is liable to grow sinuous, and being so, is called Fistula Lachrymalis, sometimes passing through the Bone of the Nose itself.

The Causes of the Ægilops are the same that produce the like Tumors in other Places. But in some Cases it is made by Fluxion, and appears first as a small Phlegmon. This Disease frequently occurs in the *Lues Venerea*; but these here treated of are strumous.

If it proceeds from the Struma, it is then made by Congestion, and the Tubercle is round, without discolouring the Skin. If it be made by Fluxion, Pain and Redness appear, with Inflammation over all the Eye. Sometimes it begins only with a Weeping of that Corner, and is not discovered till it affects the Eye with Redness; and then by Pressure with the Finger upon that Canthus, a mixed Matter may be discharged, Part of which is not unlike the White of an Egg. Sometimes this Matter eats quite through the Bone, and discharges itself downwards through the Nose, with a fetid Smell.

Fistulae Lachrymales are difficult of Cure, from what Cause soever they arise, the Part being loose and spongy, and the Eye very sensible, and the Laxity of the Part makes Humours subject to soak into it, and to penetrate even to the Bone itself. The Sensibility of the Eye renders it subject to Pain and Fluxion, and, also, unfit to be dressed with sharp Medicines, such as these Diseases require. That Fistula which is recent, with sufficient Opening, is the easiest of Cure. Those of a long Continuance are for the most part accompanied with Ulcerations of that Gland, and Caries in the Bone, which makes them subject to a Weeping after they are cured. If the Ulcer be accompanied with Erosion, it will be subject to terminate in a Cancer.

The Indication of Cure is taken from the Condition of the Ægilops, whether it be in its Beginning with Inflammation, or by Congestion, passing its Matter forth under the Cilium in the Eye; into which Case it is fistulated.

In the Beginning of the Ægilops Bleeding by Lancet is necessary, and so is purging; also, such Alteratives as have been prescribed in the general Cure of Strumæ, with Regulation of Diet accordingly.

You may attempt to resolve the Humour by some gentle Anodyne, and discutient Cataplasin; but if it inflame and suppurate, you must hasten the Maturation, as well as the Discharge, because of the Part it lies upon, and the Danger thence arising from delaying the Evacuation. Having dilated the Sinuosity, and digested the little Abscess, you may try a Sarcotic of Myrrh, Aloes, and Sarcocolla, made up with Honey of Roses, or a Tincture of the said Gums in Wine, mixed with equal Parts of the Honey. But when, notwithstanding your Endeavours to incane and agglutinate, the Matter still continues to discharge, not only by the outward Orifice, but, also, under the Cilium into the Corner of the Eye, you may try some more powerful Desiccative; such is the Solution of the *Lapis medicamentosus Crollii*, in Plantane Water, or a strong Lime-Water, assisted by a suitable Compression on the Cavity; for which a late-invented Instrument, by the Screw, has been admirably well contrived and adapted.

These Remedies failing, let it be considered, whether you have a good Foundation to heal upon; and having made Trial with your Probe, if you discover any Roughness on the subjacent Bone, or if the same be made bare by the Acrimony of the Humour, it will be to little Purpose to proceed farther in the above Method, till by a fine pointed actual Cautey you have dried it, and fitted it for Desquamation, or perforated quite through, thereby deriving the Matter by the Nostril, and disposing the Caries to throw off that Way; when your outward Ulcer, which before had baffled your Endeavours, will heal up with the milder Epulotics, or perhaps with a little dry Lint, without any farther Dilu-bance.



In the Use of Medicines to this Part, you must not only have Regard to the Eye itself, but to the Gland and its Caruncle; for if they happen to be too diterfive, corrosive, or sharp, there may be Danger of a Rhyas, or Consumption of the Part; as by the Digestive and Sarotic too long continued, an Encanthis, or too great Prominence may ensue; for which, as Incarnatives will be wanted for the former, so Catheretics will be required for the latter.

#### OF THE SCROPHULOUS TONSILS.

The Tonsils, or Almonds of the Ears, are, also, frequently swelled in the King's-Evil. These Swellings are raised by Congestion, gradually, without Pain, and, therefore, are seldom taken Notice of, till by their Growth they bring Inconveniencies with them; as a Catarrh, Cough, or Difficulty of Deglutition, insomuch, that the Drink often runs out at the Nose.

These differ from the common Swellings of the *Amygdalæ*, as Tumors by Congestion do from those made by Fluxion; which latter are of sudden Growth, and terminate as soon; whereas the other may have been many Years growing, increasing and decreasing with the Moon, as generally all Tumors by Congestion in the Glands do. The Causes of Tumefaction of these Glands are the same with those of the Strumæ.

They are soft, fleshy Tumors, of a round or oval Figure, retaining the natural Colour of the Skin, and have little Sensation; so that you may pierce the Body of them with a Knife or Probe, without causing Pain or drawing Blood; yet are they subject to Inflammation, and the like Accidents that other Swellings of the Glands are.

If the Tumefaction be small, the Disturbance is little; many having had them from their Infancy without great Inconvenience. If the Swellings be big, there may be Danger of Suffocation: But in that Case they may be extirpated without running great Hazard.

In order to the Cure, Physicians generally prescribe Venesection, and Evacuation by Clysters and lenient Purges: They, also, endeavour Derivation by blistering, cupping, Fontanels, and the like, which is necessary, in which astringent Lotions may be, also, proper. But in those made by Congestion, the speediest Way of Cure is by Extirpation; and that either by Abscission, at once cutting them off, or by actual or potential Cautery. Modern Writers have said little of these Extirpations. *Fabricius, ad Aquapendente*, makes the Abscission of them both difficult and dangerous.

The Extirpation of them may be attempted by the Actual Cautery, passing it through a Cannula, and twice or thrice perforating the Body of the Tonsil; but some Remains of the Excrecence will be left. The Way of Potential Cautery, is by working with a caustic Stone, and other Escharotics, fixed in such an Instrument as may serve to eat into them, without offending the neighbouring sound Parts. To this Purpose, make way into the Body of the Gland, consuming it within; and at last the Shell, or exterior Part, falls in Pieces, and is so eradicated. The Way by Excision is, by making a Ligature about the Basis of them, and snipping them close off with a Pair of crooked probe Scissars. In this Work you ought to consider well, how they are eradicated; for sometimes they are rooted like a Crista, deeper in the Throat; in which, if in cutting them you only cut that Part you tied, and cut the Ligature at the same Time, it will slip down into the Throat, and hazard their choaking. Therefore, while you hold the Ligature with one Hand, you must pass the Scissars down as close by the Basis of it as you can, so as by one Strip you may cut it clear off. But lest you should fail, it will be necessary to have another Ligature fitted in an Instrument for your Purpose, and the Patient's Head to be held steady, that in case you fail in the first Attempt, and it fall into the Throat, you may readily return it, and tie it at the same Time; which is no difficult thing to do. The Excision made, the Bleeding will be soon stopped by Gargling with Oxycerate; and you may cicatrize it in, few Days, by touching it with the Vitriol and Alum Stones.

#### OF THE STRUMOUS RANULA.

The Ranula is a soft Swelling, possessing the salival Glands under the Tongue, sometimes on one Side, at others on both Sides of the Frenum. It is made by Congestion, and in its Progress fills up the Space between the Jaws, and makes a Tumor externally under the Chin. It is a soft Tumor, without Pain or Alteration of Colour in the Skin, yielding to the Impression of the Fingers, but rising on taking them

off. It contains a Matter not unlike the White of an Egg, or such as we meet with in an Atheroma. By raising the Tongue, it obstructs the Freedom of its Motion, and occasions a thick Speech, which some have fancifully compared to the Croaking of Frogs; others, from a supposed Resemblance that this Tumor has to that Creature, will have it thence denominated *Ranula*. It is not dangerous as to Life, but difficult of Cure.

As for Topics, they seldom have much Effect, especially when it has been of long standing. However, some of the volatile, or of the fixed Salts, with certain Aromatics and stiptic Powders, may be held under the Tongue, to attenuate and discuss the viscous Humours; such as Sal-Ammoniac, Sal-Gem, the Powder of the Root of Ginger, Cloves, Pomegranate Peel, dried Hyssop, Powder of Galls, and the like. These, with others of the like Nature, having been ineffectually tried, the Tumor must be opened, and the Contents discharged, either by a pointed actual Cautery, which is commonly used, or by Incision.

That Stones are formed about this Part, the Tonsils, and others adjoining, some of them gypseous, or brittle, like the Gout-Stones, others more solid, like these found in the Bladder, we have many Examples; and that Struma's are liable to such Concretions, is less surprizing, if we consider the Proneness of their Juices to Coagulation.

#### OF THE STRUMOUS OZÆNA.

The Ozæna is an Ulcer of the Nostrils, so named from its fetid or strong Scent, which, if strumous, has usually the same Attendants for its diagnostic Signs, with the Ophthalmia. It admits of a doubtful Prognostic, being a stubborn Malady, hard to cleanse, so as to get a firm Foundation for healing upon; and, when of long standing, a Work difficultly accomplished.

In the Cure, the usual Evacuations by bleeding and purging may be necessary to carry off the Humour other Ways, while the same antistrumatic Alteratives are prescribed, as for the other Species. Having loosened the crusty Matter usually stopping up the Passage, by putting up a little Oil, a Bit of fresh Butter, or throwing up some emollient Injection, such as the Decoction of Mallows in Barley Water, you are, after thus digesting, to mundify, or deterge, by another Decoction of the Leaves of Agrimony, Plantain, Lesser Centaury, and St. John's Wort, adding to the strained Liquor a little of the Honey of Roses, from an Ounce to half a Pound; or if the Ulcer be putrid, half an Ounce of the Tincture of Myrrh and Aloes, more or less, according to the Degree of Putrefaction, and the Sense of the Part, may be added; as, also, of the Unguentum Ægyptiacum, an Ounce or more, especially the *Mel* thereof fluctuating on the Top, which may be farther increased, and is a most suitable Medicine, not only for the sordid Ulcers of this Part, but of the Throat also.

The Ulcer being deterged, we may attempt to heal it with the Ointment of Tutty, thrust up with a Tent, or some other Epulotic, which availing not, a stronger Desiccative must be used, as a Solution of the Lapis Medicamentosus, or the Lime-Water, with a little Honey of Roses; likewise a strong Tincture of Rose-Leaves, Pomegranate Peel, and Flowers of Balauftines, drawn in the Forge-Water, or a rough stiptic Wine: This Tincture may be thrown up with a Syringe, made with a Snout for that Purpose.

But when these, and other Errhines of the like drying Nature, succeed not, we have recourse to the cinnabarine Fumigation. Some have recommended the Fume of a Wax-Candle burnt under the Nostril, for the same Intention.

But observe, that in setting about the Cure of this Disease, as well as the Ophthalmia, with others of the same Kind, you must be careful to distinguish the venereal from the strumous; for as in the first, we can do nothing without Mercurials, so in the last, together with them, we are to direct some antistrumatic Remedies between whiles.

For the Labrifulcium, or chopped Lip, see LABRIFULCIUM. *Wifeman and Turner*.

Those Tumors are called strumous or scrophulous, which appear externally, on the anterior and lateral Parts of the Neck. Of these Tumors there are different Species; some are small, some of a moderate Size, and some surprizingly large; some are soft, others hard; some are moveable, others immoveable; some are favourable, others malignant. Scrophulous Tumors arise in indurated Glands of the Neck; sometimes in the small moveable Glands; sometimes in the superior and inferior salival Glands, and sometimes in the Thyroide Glands, which last are by some particularly called *Scrophulæ*,



*leg.*, or the King's-Evil; and by the *French*, *Bronnelles*. Some are of the same Nature with encysted Tumors, containing a Substance sometimes harder, and sometimes softer, like Cheese, Suet, or Lard. But when a Tumor arises in the anterior Part of the Neck between the Skin and the Aspera Arteria, and is distended with Air, Humors, or a thick Matter, having been occasioned by a Strain, in lifting a Weight, or the like, it is named a Bronchocele. It is proper to observe, that some Nations are almost free from this Distemper, whilst others are severely afflicted with it. Among the latter, may be reckoned the *Spaniards*, and among the *Germans*, the Inhabitants of *Styria*, *Swabia*, *Bavaria*, and *Switzerland*; but above all, those of *Tyrol*, among whom the strumous Swellings increase to such a prodigious Size, as to hang down to the Belly or Navel, and sometimes to the Knees. This Species is always flaccid. The Cause of this Disorder raging in particular Places, is ascribed to the Nature of the Air, and of the Water. But the Manner in which these operate, has not yet been sufficiently explained by Medicinal Writers, although many specious Opinions have been offered. In some Women these Tumors appear in different Parts of the Neck after a difficult Labour. Besides the Differences already mentioned, some are mild and almost without any Pain or Inconvenience; some are attended with Inflammation and Pain; some become indurated, like a Scirrhus, and obstruct Respiration and Deglutition, or being entirely malignant, gradually degenerate into a Cancer. But to whatever Species they belong, when they become inveterate, they seldom or never are cured; but when they are recent, they may be dissolved, especially when the Tumor proceeds from an Induration of the Glands.

In order to the Cure of a recent Struma, it is not only necessary to prescribe an exact Regimen of Diet and Way of Living; but also to remove the internal Cause by digestive, sudorific and purgative Medicines, agreeable to the Age and Constitution of the Patient. Such internal Medicines should, also, be assisted with the following Ointment externally applied.

Take of crude Mercury, one Ounce; Venice Turpentine, two Drams; Hogs-Lard, a sufficient Quantity to reduce them into an Ointment, in a Glass Mortar.

Let the Tumor be anointed with this Ointment several times a day, and apply the *Emplastrum de Ranis cum Mercurio*, mixed with a little Roman Vitriol, or the Plaster of Galbanum, of Sperma Ceti, of Henbane, or of Soap. It will, also, be necessary to exhibit a proper Cathartic once or twice a Week, lest the Mercury, mixed with the Ointment, should occasion a Salivation. *Sculletus* and *Fabricius ab Aquapendente*, prefer the following Ointment in this Case.

Take of the Oil of Bays, one Ounce; Rock-Allum, half an Ounce; common Salt, two Drams; make them into an Ointment.

Others, not improperly, apply *Oleum Philosophorum*, or *Petroleum Album*, either alone or mixed with the Oil of Soap. Some advise to apply to a recent strumous Tumor or Bronchocele, a leaden Collar or Plate of Lead anointed with a mercurial Ointment, and secured by a proper Bandage; by which, if the Tumor is not entirely dissolved, its Increase is at least prevented. Some superstitious Remedies are advised in this Case, which are supposed to act by Sympathy, such as drawing the Hand or Bone of a dead Person gently over the Tumor, with others of the same kind not worth mentioning.

If the strumous or scrophulous Tumor has been of long Continuance, but moveable, the Knife becomes preferable to Medicine, because it may then be entirely rooted out by Incision. But if it be entirely fixed and deeply seated in the Neck, a Cure can scarcely be expected, unless they be soft; for in this Case the large Blood-Vessels and Nerves are exposed to the utmost Danger of being divided, or at least wounded, if Incision be attempted; the Consequence of which would be some violent Disorders, or even Death itself. *Garengot* and *Petit* affirm, that no indurated or scirrhus Glands, not even those which are immovable, are connected with, or rooted in the sound Parts; and therefore Extirpation may be safely used in fixed strumous Tumors. But as they have given us no Instances of their Success from this Opinion, it must, at least, be looked upon as doubtful and uncertain. When the Tumor hangs by a slender Part, like a Stalk or Root, (which is not a frequent Case) it may be extirpated with a Ligature. But if it be connected with a broad Root, a longitudinal or crucial Incision, if the Swelling be very large, must be made through the Integuments, to the Bag of the Tumor, from which the Lips of the Wound must be separated

with the Knife. It may then be extracted, like other encysted Tumors, with the Hand, or a Hook, or a threaded Needle, or with a proper Forceps. (See *Tab. 44. Fig. 1.*) Mean while Assistants should be ready with Linen-Cloaths, or a Sponge, for wiping the Blood from the Wound, which might otherwise obstruct the Surgeon in the Operation. If a large Blood-Vessel should happen, to be divided with the Root of the Tumor, it must be closed by applying rectified Spirit of Wine, or some other styptic Liquor; and if these fail, by a Ligature or the actual Cautery. As the divided Skin is now more than sufficient to cover the Wound, the superfluous Part must be cut off, and enough left to induce a Cicatrix; then the Lips may be brought into Contact, and the Wound may be healed by a sticking Plaster, as in other Wounds. Soft Tumors of the strumous and scrophulous Kind, I have opened with the Knife or Cautery, extracted the contained Matter, deterged the Wound, and healed it, as before. As these Tumors are often attended with little or no Pain, it is not surprising that they should be often neglected, especially by the poorer Sort of People, who disregard the Deformity produced by them, and are apprehensive of the Torment they must undergo in the Cure. Such a Neglect is still less surprising, if these very Tumors should be esteemed a considerable Ornament, as they are by the *Tyrolese*. If the Patient be afraid of the Knife, Tumors of this Kind, which are mild, soft, not connected with large Veins, nor deeply seated, may be removed by Caustics. *Fleisher's Surgery*.

#### SCROPHULARIA.

The Characters are;

The Calyx is monophyllous, consisting of five long, slender, obtuse, or acute Segments. The Flower is monopetalous, anomalous, open on both Sides, generally globular, bilabiated, pitcher-shaped; the upper Lip trussed up with two small Leaves, in Form of Ears, and the Beard bent downwards, with wide lacuces; from the Inside of the Bottom of the Flower arise four Stamina. The Fruit is round, acuminate, cleaving into two Parts, and divided by an intermediate Partition.

*Berhaave* mentions fifteen Sorts of *Scrophularia*, which are;

1. *Scrophularia*; annua; folio Urticæ. *M. H.* 2. 481.
2. *Scrophularia*; annua; folio Lamii; flore luteo, *M. H.* 2. 482.
3. *Scrophularia*; nodosa; sætida. *C. B. P.* 235. *Bærb. Ind. A.* 234. *Tourn. Inst.* 166. *Scrophularia*, *Offic Scrophularia major*, *Ger.* 579. *Emac.* 716. *Raii Hist.* 1. 764. *Synop.* 3. 283. *Scrophularia major vulgaris*, *Park. Theat.* 610. *Scrophularia vulgaris & major*, *J. B.* 3. 421. *FIG-WORT*.

Figwort has tall square Stalks a Yard or more high, with two Leaves set opposite at a Joint, which are at some Distance; they are each Pair set on a contrary Position, on short foot Stalks from a broad Base, ending gradually in a sharp Point; they are serrated about the Edges, and frequently of a brown Colour, with a Smell like Elder. The Flowers grow on the Tops of the Branches in small Clusters, of a purplish dark Colour, being monopetalous, and, as it were, labiated with a gaping Mouth. The lower Part is round and hollow; the upper flat, and cut into two Parts. The Seed-Vessels are roundish pointed, cut into two Parts, full of small brown Seed. The Root is long and spreading, full of white Knobs. It grows in the Hedges and Thickets, and flowers in June.

This Plant, from the Signature of the Root, is accounted good for scrophulous Tumors, or the King's Evil in any Part of the Body; as also for the Pain and Swelling of the Hemorrhoids, or Piles either used inwardly or outwardly; as also for cancerous stubborn Ulcers. *Miller's Bot. Off.*

Its Leaves are very bitter and stinking, even more than those of Elder, and give but a very faint Tincture of red to the blue Paper; the Root gives it a deeper, which makes us conjecture, that the Sal Ammoniac, which is naturally in the Salt of the Earth, predominates in this Plant, where it is united with a great deal of fetid Oil.

By the chymical Analysis, we obtain from this Plant a great deal of volatile concrete Salt and Oil. Thus it is no Wonder, that it should be so resolvent, emollient, and sweetning. These Qualities are essential to Medicines which are to dissolve the most obstinate Tumors, accompanied with Inflammations, and those, also, which are called cold. The fetid Oil softens the Fibres, diminishes their Tension, and lenifies; whilst the Sal Ammoniac attenuates, divides and evaporates the Matter that is lodged in the Pores of the Flesh. The greatest Part of Plants that smell like Elder, or the *Stramonium*, have almost the same Virtues, with reference to Inflammations and Tumors, and none are more proper for Wounds in the tendinous Parts. The Juice of this Plant is used to cleanse the most putrid Ulcers, and even those that



are carcinomatous. The Ointment made with the Roots of this Plant, is used to resolve scrophulous Tumors, and alluage the Inflammation of the Piles. The Parts, also, must be a little strewed with the Powder of the same Roots.

Figwort Ointment, according to *Tragus's* Method, is made thus: Draw the Juice of the whole Plant in *May*, and keep it a whole Year in a Bottle well stopped; then mix it with an equal Quantity of Oil and new Wax. The same Author affirms, that he has seen it cure all Sorts of Scabs and itching Humours, even such as are but a little different from the Leprosy. He recommends the distilled Water of it very much for Pimples and Redness of the Face. The Author of the *Hist. Lugd.* advises to make the Ointment of Figwort after this manner: Take up the Roots in Autumn, bruise them with fresh Butter, and put them a Fortnight in a Vault, in a Stone-Pot well stopped; then dissolve them over the Fire, and keep this Ointment, after having strained it through a Cloth. If you follow *Tragus's* Method, you must put some Oil upon the Figwort Juice, to keep it from growing mouldy, or else mix it with a sixth Part of Spirits of Wine. If you keep this Ointment according to the *Hist. Lugd.* instead of bruising the Roots with fresh Butter, and putting them in a Vault, they must be put in Digestion in *Balneo Mariae* for three Days in a Glass Cucurbit, with its Chapter. These Ointments are excellent for the Gout, Piles and Tetters; but at the same time that they are used, a Dram of the Powder Root of Figwort, mixed with some convenient Conserve, should be taken in the Morning; or else the Patient should drink a Glass of Wine, in which the Root has been infused a whole Night. *Martyn's Tournefort.*

The *Scrophularia* has its Name from its nodous Root, whose white Knobs resembling the Tumors of the *Scrophula*, which this Plant is said to cure, gave Occasion for the Appellation. The Root cures strumous Swellings, and the Hemorrhoids, and is of Use in cancerous and inveterate creeping Ulcers, and a malignant Itch. If any Person, also, be afflicted with the tormenting Pain of the blind Hemorrhoids, let him take but a very small Quantity of the Root or Leaves of *Scrophularia* in his Meat or Drink, and he will immediately receive Ease; or let him take the Plant in Substance either dry or green, or its Decoction. This is an Observation of *Hen. ab. Heers*, who says he has had repeated Experience of the Truth of it. The Powder of the dried Root applied cures the Hemorrhoids; a Dram of the same taken inwardly, expels Worms from the Belly; the distilled Water of the Root, takes off the Redness of the Face.

The following Plaister for the Scrophula, or King's Evil, is the Prescription of Dr. *Sibbald*, in his *Prodrionius Histor. Natural. Scotiæ*.

Take Fat of Swine, one Pound, and dissolve it over a gentle Fire; then take Leaves of *Scrophularia*, Hounds Tongue, Flowers of the white Lamium, of each an equal Quantity; cut them very small, and boil them in the Fat over a gentle Fire, repeating the Boiling three or four Times, till you have an Ointment of a deep green Colour. Then weighing the Ointment, take half its Weight in Wax, as much Rosin, two Ounces of Turpentine, and an Ounce of Verdigrease. Dissolve them all together, then strain it through a Linnen Cloth, and make thereof a Mass, of which spread a sufficient Quantity upon Leather, and apply to the Place. *Raii H. P.*

4. *Scrophularia*; radice fibrosa. *Boerb. Ind. A.* 234. *Betonica aquatica*, Offic. Ger. 579. Emac. 715. *Betonica aquatica major*, Park. Theat. 613. *Scrophularia aquatica major*, C. B. P. 235. *Raii Hist.* 1. 764. Synop. 3. 283. *Tourn. Inst.* 166. *Scrophularia maxima radice fibrosa*, J. B. 3. 421. *Yque-taya Brasiliensis*, N. MSS. D. Tanc. Robinson. M. D. WALTER BETONY.

This has larger and taller Stalks than the former, less-branched, having larger Leaves, round-pointed, and in Shape like Betony, growing on longer Foot-stalks. The Flowers are in Shape like the former, but little larger, and of a redder Colour. The Seed-Vessels and Seed much alike; but the Root has none of the Knots, or Tubercles, and it grows by watry Places and Ditch-Sides, and flowers in *June*. The Root is used.

It is much of the Nature of the former, and where that is not to be had, it may supply its Place. It is, likewise, detesive and vulnerary, and is commended by some as good against the Itch. *Miller's Bot. Off.*

This Plant stinks, is bitter, detesive, and gives hardly any Tincture of red to the blue Paper; so that it is probable it may contain some Sal Ammoniac, mixed with fetid Oil and Earth. Thus it is no Wonder that it should be detesive and vulnerary. It has the same Virtues with the *Scrophularia major*. *Martyn's Tournefort.*

5. *Scrophularia*; nemorensis; folio *Urticæ* rugoso; flore atropunicante.

6. *Scrophularia*; *Melissæ* folio. T. 166.

7. *Scrophularia*; *Hispanica*; *Sambuci* folio glabro. T. 166.

8. *Scrophularia*; maxima; *Lusitanica*; *Sambuci* folio lanuginoso. T. 167.

9. *Scrophularia*; *Ruta*, caninadicta; vulgaris. C. B. P. 236. *Ruta canina*. Clus. H. 209.

10. *Scrophularia*; *Lusitanica*; frutescens; *Verbenacæ* foliis. T. 167.

11. *Scrophularia*; *Orientalis*; foliis *Cannabinis*, T. Cor. 9.

12. *Scrophularia*; *Nebrodenis*; folio *Urticæ*; altissima; flore Phæniceo. H. Cath. H. Maurocen. 158.

13. *Scrophularia*; peregrina; frutescens; foliis *Teucrii* crassiusculus. *Breyn. Prodr.* T. 166.

14. *Scrophularia*; subrotundo, crasso, & nigricante folio; flore luteo-pallido; capsula turgida. *Bocc. Mus.* 2. 65. T. 60.

15. *Scrophularia*; *Hispanica*; foliis tenuissimis. *Salvad. Boerb. Ind. Alt. Plant. Vol.* 1.

This Plant takes its Name *Scrophularia* from *Scrophula*, because by its Inequality it resembles the *Scrophula*, and not because it cures scrophulous Tumors about the Neck, as the common Opinion is. The third Species is the *Scrophularia major* of the Shops; but the *Scrophularia minor* is the same as the *Chelidonium minus*.

The *Scrophularia* is of an acrid and aperient Quality, accompanied with a copious Mucus; whence it is an effectual Lenitive in all Pains proceeding from a peccant Acrimony, mitigating the same, as well as dissipating any gross Matter. A Cataplasin thereof is of universal Esteem for dissolving, resolving and maturing, though the Humour be of considerable Hardness. The Leaves, dried in the Shade, retain their corroborating Virtue. The Powder sprinkled on watry Ulcers, closes and conglutinates them, and is proper in a Dilatation of the Hemorrhoids. The third is commended for curing all Strumæ, and resolving hemorrhoidal Tumors. The fourth takes off the nauseous Taste of *Senna*; and because no Cathartic is in better Esteem than *Senna*, a certain Surgeon made a profitable Secret of it, but was discovered by a Botanist, who, by putting the Leaves in Water, found it to be this Plant, and by the same means discovered whence *Senna* had such an Effect. In order, therefore, to take off the nauseous Taste of *Senna*, as well as perfectly to remove its Acrimony, by which it is offensive to the Brain and Nerves, to two Drams of *Senna* add half a Dram of this Plant. The Leaves fresh bruised and applied, cure the Hemorrhoids and Corns in the Feet. *Hist. Plant. Acript. Boerhaave.*

SCROTOCELE. A Hernia of the Scrotum.

SCROTUM.

The Scrotum is the cutaneous Covering of the Testes outwardly. It is a Bag common to both, formed by a Continuation of the Skin of the neighbouring Parts, and commonly very uneven, having a great Number of Rugæ on its outward Surface. Interiorly it is fleshy, and forms a Muscular Capsula for each Testicle, termed Dartos.

The exterior or cutaneous Portion of the Scrotum is nearly of the same Structure with the Skin in general, of which it is a Continuation, only it is something finer; and it is likewise plentifully stored with sebaceous Glands and Bulbs, or Roots of Hairs.

Though it is a common Covering for both Testicles, it is nevertheless distinguished into two lateral Parts by a superficial and uneven prominent Line, which appears like a kind of Suture, and from thence has been termed Raphe.

This Line is a Continuation of that which divides, in the same manner, the cutaneous Covering of the Penis; and it is continued through the Perinæum, which it divides, likewise, all the way to the Anus. It is only superficial, and does not appear on the Inside of the Skin.

The inner Surface of this cutaneous Bag is lined by a very thin cellular Membrane, through which the Bulbs and Glands appear very distinctly, when we view its Inside. The Rugæ of the Scrotum are in the natural State commonly a Mark of Health, and then its Size is not very large. It increases in Size, principally according to its Length, and then the Rugæ disappear, more or less, according to the Degrees of the preternatural State or Indisposition. *Winslow's Anatomy.* See DARTOS.

For the Dropsy, and *Paracentesis*, of the Scrotum, see HERNIA. And for proper Bandages for the Scrotum, see FASCIE.

SCRUPULUS. A Scruple; a Weight equal to twenty Grains. It is the third Part of a Dram, and the twenty fourth of an Ounce.

SCUMA. The same as *Squama*. A Scale. *Rulandus.*

SCUTA TABESI. A Tortoise. *Rulandus.*

SCUTALIS CARTILAGO. The Scutiform Cartilage, at the inferior Part of the Sternum. From *Scutum*, a Shield.

SCUTELLARIA. See CASTIDA.



SCUTIFORME OS. The *Patella*.  
SCUTIFORMIS CARTILAGO. The same as *Scutalis Cartilago*.

SCUTUM. A Shield. The *Patella*, is, also, sometimes thus called.

In Pharmacy, a *Scutum*, or Shield, is a pretty solid stomachic Topic, made in the Form of a Shield; and may be either prepared by Way of Bag or Plaister. The former is to consist of hot stomachic Powders, of a corroborating Quality, and the latter, of a due Mixture of Mastich, some stomachic Powder, and the odorous Gums, with a proper Quantity of Turpentine. The Topics of this Kind are used after purging, in order to corroborate the Stomach, correct a cold Intemperature, restore Digestion, and prevent vomiting, *Morelli, Form. Remed.*

SCYBALA. σκυβάλα. Excrement indurated in Lumps.

SCYBELITES. σκυβελίτης. A Sort of Must, which distils spontaneously from Grapes, without pressing.

SCYLACION. σκυλάκιον. The Flesh of Puppies. *Hippocrates*.

SCYROS. σκύρος. A Scirrhus. *Hippocrates*.

SCYTALA. A Sort of Serpent, resembling the *AMPHISBOENA*, which see.

SCY'TALIDES. σκυταλίδης. The *Phalanges* of the Fingers.

SCYTALION. A Name for the *Cotyledon*, or *Umbilicus Veneris*. *Oribasius, Medicin. Collect. L. 11.*

SCYTHICA RADIX. Liquorice. *Blancard*.

SEB. Gold; or *Alum*. *Rulandus*.

SEBEL. The Arabic Name for the Disorder of the Eye called a *Pannus*.

SEBESTEN. See *MYXA*.

SEBUM. Suet. Sucts are esteemed emollient, discutient, and somewhat astringent. That of the Stag, Fallow Deer, Goat, Kid, Sheep, and Cow, are used in Medicine.

SECACUL. A Name for the *Tordylium*; *Orientalis*; *Secacul Arabum dictum Ratuvolfio*.

SECALE. The Characters are;

It has all the Characters of Wheat, only it has a flatter Spike, which is always bearded with a thinner and more naked Grain.

*Boerhaave* mentions ten Sorts of *Secale*, which are;

1. *Secale*; *hybernium*; *vel majus*. *C. B. P. 23. Theat. 425. Tourn. Inst. 513. Boerb. Ind. A. 2. 156. Secale, Offic. Ger. 61. Emac, 68. J. B. 2. 416. Raii Hist. 2. 1241. Synop. 3. 388. Secale vulgatus, Park. Theat. 1128. RIE.*

Rie grows taller than any other *English* Corn, with a bearded Ear, slenderer than Wheat, and having a smaller darker Grain. It is a Winter Corn, and ears a Month earlier than Wheat, it being a common Saying, That *April* never goes out without an Ear of Rie, nor *May* without an Ear of Wheat.

Rie is more used for Bread than for Medicine, tho' it is less nourishing than Wheat, and subject to cause Gripings in those not used to it.

The Farina is sometimes prescribed outwardly in Cataplasms against Tumors and Inflammations. *Miller's Bot. Off.*

*Secale* is so called a *secundo*, "from cutting;" for there being two Sorts of Fruits of the Earth, the *frumentaceous* and *leguminous*, the latter are gathered, (*leguntur*) or pulled by the Hand, but the *frumentaceous*, such as Rie, and other like Grain, are cut (*secantur*) or reaped.

There are two Species of Rie observed by *C. Bauhine* and *Miller*; one the common, or Winter Rie; the other the lesser, or Spring Rie. The first is sown in Autumn, as Wheat; the other may be sown in the Spring, in the Season for Barley; but those seem to differ only in the Time of Sowing, and the Accidents thence produced.

Rie holds the next Place to Wheat among *frumentaceous* Grain; the Bread made of it is black and heavy, and has something of an obstruent Quality, is difficult of Concoction, and heavy upon the Stomach, especially if it be not cleansed from the Bran, and generally provokes to Stool, not without Gripings, to such as are not used to it. The Country People are persuaded that the Use of Bread made with Rie strengthens the Body. And *Brigerinus* assures us, that in the County of *Lyons*, and the neighbouring Parts, the Women who feed on Rie-Bread, are strong, jolly, and handsome, tho' at the same Time he supposes, that this affords but a very mean Aliment to the Body. Some prefer Bread made of Rie to what is made of Wheat or Spelt, on account of its Moistness, and because it is not so soon dried with the Air.

The People of our Country, says *Bauhine*, use to mix with this Rie an equal Quantity of Meal of Wheat or Spelt, that the Bread may the longer retain its Softness, and be the lighter and more grateful to the Taste; and the Bread so prepared is,

by Advice of the Physicians, much used by Persons of Quality, especially in Summer.

Here in *England*, and, as *Ruellius* says, in *France*, we sow not only Rie by itself, but mixed with Wheat, almost in equal Quantities; and this Mixture we call by a Latin Name, *Miscellane*, and in some Places *MUNG-CORN*.

The Meal of Rie, not cleansed from the Bran, bound about the Head in a Linnen-Cloth, is a very certain and approved Remedy in an inveterate Pain of the Head, and is observed, also, to be of Service in a Delirium, especially if mixed with some Tops of Wormwood. *S. Paulli*. It is usual among the common Sort, to put some dry Meal of Rie in a Linnen-Cloth, and apply it to the Place affected with an Erysipelas, and by that means to disperse it.

By immoderate Rains, the lower Corn of the Ears of Rie, when ripe, grow out into a black purple Grain; or as *C. Bauhine* expresses it, some Seeds are protruded a considerable way out of their Husks, and grow to a considerable Bulk; and some of them are bent in the Figure of a Horn; all which contract a black Colour on the Outside, but contain within a white farinaceous Substance, of a pretty close Contexture, of the Taste of Malt, called in some Parts of *Germany* *MUTTERKORN*, that is, the *Mother of Rie*, and esteemed a sovereign Remedy in an immoderate Flux of the *Lochia*. This degenerate *Secale* is, by *C. Bauhine*, called *Secale Luxurians*; and by *Lonicerus*, *Clavi Siliginis*. It is proper to enquire whether the Excrecences be occasioned by the Puncture of an Insect. *Raii Hist. p. 1741.*

2. *Secale*; *vernium*; *vel minus*. *C. B. P. 23. M. H. 3. 179.*

1. *Gramen*; *spicatum*; *secalinum*; *latifolium*; *maritimum*; *spica brevior*. *T. 518. Spartium maritimum; fructu oceanum, latifolium. J. B. 2. 512.*

2. *Gramen*; *spicatum*; *secalinum*; *maritimum*; *maximum*; *spica longior*. *T. 518. Spartium, spicatum, pungens, oceanum. J. B. 2. 511.*

3. *Gramen*; *spicatum*; *secalinum*; *maritimum*; *maximum*; *spica laxior*. *T. 518. Spartium, Hollandicum, maximum, maritimum, spica secalina. Raii Hist. 1260. Meth. 172.*

4. *Gramen*; *Spartium*; *Juncifolium*. *C. B. P. Theat. 69. Spartium; parvum Lobelii. J. B. 2. 513.*

5. *Gramen*; *Spartium*; *Hollandicum*; *folio capillaceo*; *minus*. *C. B. P. 5. Prodr. 11. No. 30.*

6. *Gramen*; *Spartium*; *Hollandicum*; *variegatum*. *C. B. P. 5. Theat. 72.*

7. *Gramen*; *spicatum*; *aristis longissimis*; *fetas equinas referentibus*.

8. *Gramen*; *Spartium*; *pennatum*. *C. B. P. 5. Spartium, Austriacum, pennatum. Clus. H. 221. Boerb. Ind. Alt. Plant. Vol. 2.*

The Seeds of Rie yield a Meal, with a proper Bran belonging to it, of which Bread is made, which is of excellent Service in such Cataplasms as are emollient and resolvent. The Crust of it toasted, cleanses the Teeth. The Bread is less nourishing, and not so soon digested as that of Wheat, but is very loosening, and good for those who are costive. The Bran is detestive and emollient, and of Service in a *Diarrhæa* and an inveterate Cough. *Hist. Plant. ascript. Boerb.*

SECAMONE. The Name of a Species of *Ægyptian* *Apocynum*, called by *C. Bauhine*, *Apocynum angusto foliis folio*. It grows in *Ægypt*, and is remarkable for a yellow hot Juice which flows from it, and which, when dried, is said to purge off powerfully thin Humours. *Raii Hist. Plant.*

SECANIABIN. Oxymel. The Word is Arabic.

SECESSUS, imports either an Abscess, or a Separation of Parts in a mixed Body; or a Stool.

SECHA. Wormseed. *Castellus* from *Ardoimus*.

SECLA. The same as SECALE. Rye.

SECRETIO. Secretion. See GLANDULA.

SECTA. A Sect. For an Account of the various Sects of Physicians, see THE PREFACE.

SECTACROA. The Flower of Nutmeg. *Donæus*.

SECUNDINÆ. The Secundines, or After-birth. See CHORION, AMNIO, ALLANTOIS, and GENE-RATIO.

The Human Secundine is said to be of some Use in Medicine. Thus it is by some ordered to be applied, warm as it comes from the Uterus, to the Face, in order to remove Freckles. A Water is also distilled from it in *Balneo Marie*, for destroying Spots or Blemishes of the Face. When dried and reduced to a Powder, it is used internally against Epilepsies, for accelerating the Delivery of the Fetus, and allaying the Pain of Wounds. The Dose of this Powder is from half a Scruple to two Scruples. *Lenery des Droguës.*

SECUNDIFORMIS. The same as CHOROCIDES.

SECUR. Gold. *Rulandus*.



## S E D

### SECURIDACA.

The Characters are ;

The Flowers are disposed in Form of Rays, and the Pod is strait, flat, annulated, full of Joints, and containing in each Joint a rhomboidal Seed, emarginated inwardly.

*Boerhaave* mentions but one Sort of *Securidaca*, which is, *Securidaca lutea major*. *C. B. P.* 348. *Raii Hist.* 1. 921. *Tourn. Inst.* 399. *Boerb. Ind. A.* 2. 52. *Securidaca*, *Offic.* *Securidaca flore luteo, siliqua latâ, oblongâ* ; *I. B.* 2. 345. *Securidaca, Hedyfarum, Pelecium*, *Chab.* 155. *Hedyfarum majus sive Securidaca major vera*, *Park. Theat.* 1087. *Hedyfarum majus*, *Ger.* 1056. *Emac.* 1233. **HATCHET VETCH.**

It grows among the Corn in hot Countries, but is cultivated with us in Gardens, and flowers in June.

*Securidaca*, or *Hedyfarum*, is described by *Dioscorides* as a shrubby Plant, with Leaves like the *Cicer*, and Pods resembling a Horn, and containing a yellowish Seed, of the Figure of a two-edged Hatchet, whence it took its Name *Pelecium*, [*πιδικυς*, *Pelecy* signifying a Hatchet, or Ax] and of a bitter Taste. It grows among Wheat and Barley.

*Clusius* says, that the Seed of no Plant better resembles the Hatchet of the Antients than this ; and *L.* says *Dale*, am of this Opinion.

*Securidaca* taken inwardly, is good for the Stomach, and is an Ingredient in Antidotes. Used in a Pessary with Honey before Coition, it is supposed to prevent Conception. *Dioscorides*, *Lib.* 3. 146.

The *Historium Plantarum* ascribed to *Boerhaave*, says its Virtues are unknown.

*Securidaca Egyptia*. A Name for the *Senna* ; *Orientalis* ; *fruticosa* ; *Sophora diffusa*.

*Securidaca dumetorum*. A Name for the *Coronilla* ; *herbacea* ; *flore vario*.

*Securidaca peregrina*. A Name for the *Pelecium* ; *vulgaris*.

**SEDAFF.** *Rulandus* explains this *Concha marina*.

**SEDALIA VASA.** The hæmorrhoidal Vessels. *Willis*.

**SEDANTIA.** Sedative Medicines.

Sedative Medicines are such as are possessed of a Power not only of composing, checking, and allaying the exorbitant and irregular Motions of the Solids and Fluids, but, also, of alleviating and resolving the painful, spasmodic Structures of the Parts. As the Effects of these Medicines are very extensive, we may justly include in their Number, Purgatives, which not only gently relax and soothe the rigid Fibres, but, also, obtund the Acrimony of the Juices ; Anodynes, which alleviate the Violence of racking Pains ; Antispasmodics, which mitigate and remove the spasmodic Structures of the Parts ; Antiepileptics, which check convulsive Motions ; Hypnotics, which procure Sleep ; and Narcotics, which induce a considerable Stupor of the Senses, and Torpor of all the Motions of the Body.

This sedative Quality is eminently possessed by the Roots of Piony, Valerian, and Mug-wort ; the Herbs Clary, Basilicon, Night-shade, and Herb Paris ; the Flowers of Sage, Basilard Dittany, the *Egyptian* Thorn, Meadow-sweet, Elder, the Lime-Tree, Piony, red Poppy, common Chamomile, Yarrow, Roses, Mallows, Lily of the Valley, Primroses, and white Lillies ; all the Parts of the Poppy, such as its Seeds, Bark, Flowers, Juice, Opium and the Seeds of white Henbane, Dill, and Piony ; the Barks of Elder, and the Lime-Tree : Among aromatic Substances, Saffron, Nutmegs and Mace ; among Fruits, the Kernels of Cherries, Peaches, Bitter Almonds, and the Nux Vomica. To this Class, also, belong *Asa-fetida*, Camphire, depurated and artificial Nitre, Preparations of Cinna-bar, and Substances obtained from Animals, such as Castor, Musk, Civet, human Fat, that of Dogs, Badgers and Foxes, Milk, Cream, the Yolks of Eggs, Earth-worms, and the Shavings of Bones, such as those of Hartshorn, of the Tooth of the Sea-Horse, of the Elk's Hoof, of the Animal Unicorn, of Ivory, of the Stone found in the Head of the Sea-Cow, and of the Human Skin : Among chymical and prepar'd Substances, my anodyne mineral Liquor, the Spiritus Nitri Dulcis, volatile Tincture of Sulphur, Laudanum Opiatum, the Laudanum of Sydenham, Laudanum impregnated with the Juice of Quinces, Hysteric Laudanum, Theriaca, Diacordium, the Theriaca Cœlestis, the Pilule de Cynoglossa, the Pilule de Styrace, the Pilule Wildegansii, and the Pilule Starkei ; the Syrups of red Poppies, Chamomile and Yarrow, the Oils of Henbane and Earth-Worms, the anti-epileptic Powder of *Dresden*, (the Basis of which consists of the Ashes of the Lime-Tree and Mug-Wort ; ) the cephalic Specific of *Micheali*, the Pulvis Marchionis, the anti-epileptic Water of

## S E D

Langius, Waters distill'd from the above-mentioned Flowers, and the Ointment of Poplar.

These Sedatives, in various Manners, exert their Efficacy both on the Solids and Fluids of the human Body. Thus Purgatives, by their mild, mucous, sulphureous and subtle Parts, by an immediate Contact, not only relax the indurated and spasmodically constricted Fibres, but, also, sheath up and obtund the vellicating Spicula, and consequently in Pains, painful Tumors, and acrid Defluxions, great Service is done by Cataplasms, Plaisters or Ointments, prepared with Saffron, the Flowers of common Chamomile, Melilot, white Lillies, Elder, Mallows and Poppies, the Leaves of Henbane, Milk, Cream, the Yolks of Eggs, and the Poplar Ointment for Burns, which is most commodiously prepared of Mallows, the Barks of the Lime and Elder Trees, Linseed Oil, and Wax.

As many Disorders and Symptoms arise, as from their proximate Cause, from spasmodic Strictures and Crispatures of the Vessels and nervous Parts, so Antispasmodics are of very extensive Use in Medicine, though they do not produce their Effects in one and the same Manner ; for, by an immediate Contact, they either mollify and relax the tense, indurated, and constricted Fibres, as Milk, especially that of Asses, Oil of Sweet Almonds, Emulsions of Almonds, and of the four cold Seeds, the Fats of Animals, and the Cream of Milk ; or by their mild, volatile Sulphur, they allay the tumultuous Commotions of the nervous Fluid : Of this Kind the most considerable are, Waters distill'd with Rain-Water, or May-Dew, from the Flowers of Sage, Basilard Dittany, the *Egyptian* Thorn, the Lime and Elder Trees, Meadow-Sweet, Peaches, white Lillies, common Chamomile, Cowslips and Yarrow ; the Kernels of Peaches, Cherries, and Apricots ; which Waters, on Account of their antispasmodic Virtue, are with great Benefit exhibited in convulsive and epileptic Fits ; or some Antispasmodics produce their Effects by a certain subtle, volatile Sulphur, obtained from the animal Kingdom, and consequently more friendly to Nature, such as Earth-Worms, Castor, the Powders of the human Secundines, of the Intestines of Wolves, Vipers, the Shavings of the human Skin and Cranium, of the Elk's Hoof, of the Tooth of the Sea-horse, and of the Stone found in the Head of the Sea Cow ; as, also, Musk and Civet, which in epileptic and convulsive Motions, as, also, in chronical Epilepsies, are used with great Success.

Of an anodyne Quality, proper for alleviating Pain, and inducing Sleep, are Preparations of Poppies, Opium, Saffron, and Hounds Tongue, which, by their volatile sulphureous Exhalations pervading the small Tubes of the Membranes, check the tumultuous Commotions of the nervous Fluid, and thus not only allay the preternatural Motion in the Part affected, but, also, in the whole Body, since by this Means the Motions of the Heart and Arteries are render'd more moderate ; for, as during an excessive Motion and Agitation of the Membranes of the Brain and nervous Parts, the Patient is afflicted with watching ; so when these are in a quiet and moderate State and Condition, a kindly Sleep approaches.

But Narcotics, which induce a Torpor and Stupor of the Senses, together with profound Sleep, by a sulphureous, ungrateful, and unfriendly Vapour, by which the Motion of the nervous Fluids is almost extinguish'd, operate in so dangerous a Manner as to prove mortal to weak Habits, and in others to produce Madness. The pernicious Medicines of this Kind are, all Preparations of white and black Henbane, of the Thorn-Apple, and a particular Species of it, the Duroy, as, also, of Night-shade, and its Apples.

Some Sedatives, also, allay Spasms, mitigate Pains, and procure Sleep, by removing the Causes which hinder these salutary Effects : Of this Kind the most efficacious are Nitre purified, or artificial ; as, also, Preparations of Cinna-bar and Camphire ; for nitrous Preparations not only check the Heat and brisk intestine Motions of the sulphureous Parts of the Blood, but also moisten the solid Parts, and render their exorbitant Motions more moderate, so that they possess an excellent refrigerating, moistening, anodyne, and antispasmodic Virtue. Preparations of Cinna-bar, skillfully us'd, are of singular Service in mitigating those epileptic and convulsive Motions, which arise from viscid Lymph, stagnating in the Brain, and in the Membranes thereof ; and the spinal Marrow ; because, when their Use is long persisted in, they powerfully colliquate such a viscid Lymph. Camphire, especially when mixed with Nitre, excellently dissolves Inflammations, which are always accompanied with Watchings, Pains, and sometimes a Delirium ; and thus it exerts an antispasmodic and sedative Virtue. *Asa-fetida* and *Sagapenum*, two terid Gums, exert their Efficacy in two Manners in allaying those Spasms of the Intestines, which, in hysterical Disorders, greatly afflict Women, partly because they soothe



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the Spasms and Pains; and partly because by their saponaceous, guminous and acrid Salt, they resolve the tenacious Juices, and remove Obstructions of the Glands and minute Duets.

Sedatives are therefore of singular Efficacy, since, in Consequence of their active Principle, and subtile volatile Exhalations, when exhibited in very small Doses, they not only suddenly, but intimately pervade the interior Pores and Duets of the solid Parts, but also remarkably change and allay the exorbitant Motions of that highly subtile and moveable Lymph, which communicates Sensation and Motion to the Parts. But as in all Medicines, the more mild, gentle, safe, and friendly to Nature, are to be preferred to those of a more drastic and active Kind, so the same Caution is carefully to be observed, and diligently inculcated in the Use of antispasmodic, anodyne and sedative Medicines. Nor are we ever to use those of the more drastic Kinds, such as Opiates, when the Intention can be answered by those of a milder Nature, such as hypnotic Waters, prepared from fragrant Flowers, Emulsions of Poppy-Seeds, or Preparations of Nitre, Cinnabar and Castor.

And tho' Opiates, corrected by the Addition of Purgatives and Balsamics, as in the *Pilulæ Starkei*, and the *Pilule Wildegansii*, or by the Addition of Alexipharmics, as in the *Theriaca Cælestis*, and the *Diascordium*, or by the Addition of Analeptics, as in the *Laudanum of Sydenham*, are of singular Use and Efficacy, if prudently exhibited; yet if other safer Medicines, capable of producing the same Effects, can be found, 'tis better totally to abstain from the former, especially in weak Habits, old Persons, Children, and Patients whose Strength is impaired by whatever Cause. But we are still more carefully to abstain from those Medicines which have a Mixture of narcotic Substances in their Composition, such as the *Pilule de Cynoglossò*, which besides Opium, contain the Seeds of Henbane; and tho' these Pills are at present frequently used by some who are Enemies to all other Opiates, yet I have sometimes observed terrible Effects produced by the Use of them.

Tho' I formerly made frequent Use of corrected Opiates, yet since I happily found the Method of preparing from the sulphureous Portion of Vitriol, which was by the ancient Chymists accounted anodyne, that penetrating Liquor, which is of a fragrant Smell and aromatic Taste, I have safely rejected the Use of all other Opiates: For this Spirit, which I call my anodyne mineral Liquor, is totally sulphureous, burns suddenly and violently till it is consumed, suddenly takes Fire by the Flame of a Candle, tho' at three Inches Distance from it; and in a warm Room is quickly dissipated in the Air. It is, however, cold as Ice to the Touch, and when well distilled and rectified, like Oil it swims upon Water. The Use of this Medicine is very extensive, and its Virtues very various; for it excellently alleviates Pains, and procures Sleep; hence it is with great Success used in violent Pains of the Cholice, Stone, Cardialgia and Gout, as also in Head-achs and Tooth-achs. It also promotes Sweat; and tho' it is of an intensely hot Nature, yet it produces no Commotions in the Blood. Besides, it leaves no Torpor nor Weakness in the Head; for which Reason it is with great Success exhibited to all weak Constitutions, when the Strength is greatly impaired, as in an hectic Fever, for Instance; and which is still more surprising, it even increases the Strength. And as its principal and primary Action is on the Stomach, so it is of singular Use in all Disorders incident to that Part, such as Nauseas, hypocondriac, asthmatic and cardialgiac Inflations, by procuring a Discharge for the Flatulences. *Frederic Hoffman*. See LIQUOR MINERALIS.

SEDENTARIUM OS, in *Deventer*, is the Protuberance of the *Os Coxendicis*, upon which we sit.

SEIDES. The ANUS. It, also, imports a Species of Fracture. See FRACTURA and HEDRA.

SEDHE. Cinnabar. *Rulandus*.

SEDIGITUS. A Person who has six Fingers.

SEDIMENTUM. Sediment.

SEDINA, or SEDEN. Dragons Blood. *Rulandus*.

SEDMA. The Lapis *Hematitis*. *Rulandus*.

SEDUM.

The Characters are;

The Leaves are alternate, not ordinate. The Calyx is monophyllous, multifid, and deeply cut into as many Segments as the Flower has Petals, which are five, at least. The Flower is pentapetalous, or polypetalous, rosaceous, and generally furnished with as many Stamina as Petals. The Ovary is seated in the Bottom of the Calyx, and consists of a Multitude of little Husks, equal in Number to the Petals of the Flower, each furnished with one Tube, nearly resembling Sheaths, with a corniculated Apex, collected into a round Head, somewhat distant from one another, and containing great Numbers of small Seeds.

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*Boerhaave* mentions twenty eight Sorts of *Sedum*; which are;

1. *Sedum*; majus; arborescens. *J. B.* 3. 686. *M. H.* 3. 470. *Sempervivum*, five *Sedum*, arborescens, majus. *Dod.* p. 127.

2. *Sedum*; majus; arborescens; *J. B.* *Folii elegantissime variegatis, tricoloribus*.

3. *Sedum*; Canarinum; foliis omnium maximis. *H. A.* 2. 189.

4. *Sedum*; Africanum; frutescens; folio longo, ferrato, confertim nato. *Ind.* 121.

5. *Sedum*; Africanum; frutescens; caule pellucido; folio subrotundo. *Ind.* 121.

6. *Sedum*; Afrum; montanum; foliis subrotundis, dentibus albis ferratis, confertim natis.

7. *Sedum*; vulgare; maximum. *M. H.* 3. 474.

8. *Sedum*; majus; vulgare, *C. B. P.* 289. *Raii Hist.* 1. 687. *J. B.* 3. 687. *Tourn. Inst.* 262. *Boerb. Ind. A.* 286. *Sempervivum majus*, *Sedum majus*, *Offic. Sempervivum majus*, *Ger.* 411. *Emac.* 510. *Raii Synop.* 3. 269. HOUSE LEEK.

House Leek has a great many thick succulent Leaves, set together in a round Form, convex on the Outside, and flattish within, sharp pointed, and with somewhat hairy Edges. The Stalk grows to be about a Foot high, reddish, and having a succulent Bark, covering a tough, white String or Pith; the Leaves which grow on it are thinner and longer than those below; on the Top of the Stalks grow reflected Spikes of starry Flowers, made up of several narrow, sharp pointed reddish Petals, set about a greenish hollow Crown, which is afterward enlarged into several small, hollow, horned Pods, or Seed Vessels, which inclose very small Seed. The Root is long, woody, and full of Fibres; it grows frequently on the Tops of Houses all over England; tho' Mr. Ray seems to doubt, whether it be a Native or no.

House Leek is cooling and restraining, and tho' not often given inwardly, is commended by some as good to quench Thirst in Fevers, mixed with Posset-drink, as also for Heat and Sharpness of Urine. *Prevotius*, in his *Medicina Pauperum*, commends an equal Quantity, that is, three Ounces of the Juice of this, and *Perficaria maculata*, boiled to the Consumption of a third Part, and given in Drink as a certain Medicine to stop a Looseness and Bloody Flux. Outwardly it is useful against Burns and Scalds, St. Anthony's Fire, and the Shingles. *Miller's Bot. Off.*

This Plant being analysed, yields a good deal of Acid and Earth, and a very little concrete volatile Salt. It probably contains a Salt resembling Alum, mixed with a little Sal-Ammoniac; for the Juice of this Plant evaporated to one Half, emits an urinous Smell. The House Leek is deterfive and astringent; it is used sometimes to resolve, but it is repellent. For the Quinsy, gargarize the Patient with the distilled Water, and apply some Cray Fish to the Throat, bruised with its Leaves. The Juice also of Cray Fish and House Leek, is used with Success as a Gargarism. These Juices are used also in Injections in the *Procidencia Uteri*, and sinuous Ulcers. The Leaves are applied to Corns, and the Knots of the Gout. For foundered Horses, nothing is better than to make them drink a Pint of the Juice of this Plant. *Martyn's Tournefort*.

It is customary, with us, among the common Sort, says *Schroder*, to give the expressed Juice of House Leek and Sugar in Fevers and hot Diseases. The Botanists in our Country prescribe the Juice infused in Posset, and Dr. *Tancred Robinson* says, he has known it exhibited with good Success in Fevers, and especially in those of the erysipetulous and hectic Kinds; for this Plant abounds with a medicinal alkaline Salt.

*Tragus* writes, That Linnen Cloths moistened with the Juice or distilled Water, and applied to Inflammations in any Part of the Body, and especially in Phrensies, are of extraordinary Service, as they are, also, in Inflammations and Redness of the Eyes, as well as of the Liver and Kidneys; they give Relief, also, under the Gout, and cure Amblyopsias. The Juice mixed with the Juice of *Solanum*, and boiled in Swines Fat with Poplar Buds, then strained and made into an Ointment, is of admirable Efficacy, and, in the Opinion of *Tragus*, to be preferred before all Preparations of Unguentum Populeum whatever. *Galen* and *Dioscorides* direct the Application of the Juice with Vinegar, instead of an Epithem, to an Erysipelas, which no Physician, says *Caspar Hoffman*, in our Times, would venture to prescribe. The Juice rubbed on Warts and Corns, so as that they may be well moistened therewith, and the Cuticle or thin Membrane of the Leaves afterwards laid upon the same, effectually cures and extirpates them. For Corns, or horny Excrecences of the Feet take of Leaves of the greater House Leek, a sufficient Quantity, bruise them, and apply them for six Days together, *Chompsau*.

For



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For Ulcers of the Matrix and Urethra, take Juice of the greater House-Leek, four Ounces; Litharge, one Ounce; with two Yolks of Eggs; beat them all together in a leaden Mortar, and so use them. It is the Prescription of a Surgeon of Paris.

The Leaves of the great House-leek stripped of their outer Membrane, and put into pure Water, or Rose-Water, and every now and then applied to the Tongue, when dry or chapt, in Fevers, and renewed frequently, are remarkably lenient and serviceable in such a Case. *Raii Hist. Plant.*

9. Sedum; vulgari magno simile. *J. B.* 3. 688.

10. Sedum; montanum; tomentosum. *C. B. P.* 284. *M. H.* 3. 474. *Sempervivum, montanum, rubrum, gnaphalodes*, Col. 1. 291.

11. Sedum; Alpinum; roseum; minus; viride; & sub-hirsutum.

12. Sedum; echinatum; vel stellatum, flore albo. *J. B.* 3. 680. *M. H.* 3. 473. *Cotyledon stellata*. *C. B. P.* 285.

13. Sedum; minus; teretifolium; album. *C. B. P.* 283. *Raii Hist.* 2. 1040. *Synop.* 3. 271. *Tourn. Inst.* 262. *Boerb. Ind. A.* 286. *Sedum minus*, Offic. *Sedum minus Officinarium*, Ger. 413. *Emac.* 512. *Sedum minus folio longiusculo, tereti, flore albo*, *J. B.* 3. 690. *Vermicularis flore albo*, Park. Theat. 733. SMALL HOUSE-LEEK.

The Stalks of this Sedum, before they flower, are of a blueish green Colour, beset, especially towards the Tops, with fat, thick, succulent, blunt-pointed, round Leaves. When they arise to flower, they have a few of the like Leaves growing alternately on them. They have on their Tops small Umbels, of white five-leaved Flowers, which are succeeded by as many little horned Seed-Vessels, full of very small Seed. The Root is fibrous. It grows upon old Stone-Walls and Buildings, and flowers in Summer.

The Leaves and Stalks are used, being much of the Nature of the great Sedum, and, like that, cooling and good for all Kinds of Inflammations. This is the *Sedum minus* that ought to be put in the *Unguentum Populeon*; but if not to be procured, the Prickmadam may supply its Place. *Miller's Bot. Off.*

14. Sedum; minus; lato & crasso caule, Portlandicum Belgarum; *M. H.* 3. 471.

15. Sedum; minus; luteum; folio acuto. *C. B. P.* 283. *M. H.* 3. 471. *Sedum; minus; flore luteo*, *J. B.* 3. 692. PRICKMADAM.

This Sedum, in manner of growing, is much like the small Houseleek. The principal Difference is, that the Leaves are slenderer, sharp-pointed, flattish in the Inside, and seeming only stuck on the Stalks; the lower Parts of them turning up a little. The Flowers grow in Umbels, being yellow, of six sharp-pointed Leaves, with as many Stamina and Apices in the Middle. The Seed grows in horned Pods as the other, and the Roots much alike. It grows upon old Walls, and on the Tops of Houses; and is much more frequent than the last, flowering at the same time, and may very well supply its Place, being as cooling, and in all Respects as serviceable. *Miller's Bot. Off.*

This Plant has an herby, styptic, saltish Taste, and gives a pretty deep Tincture of Red to the Blue Paper, which seems to shew that its Salt resembles Alum; but is mixed with a little Sal Ammoniac, a pretty deal of Sulphur, and a great deal of Phlegm. Thus it is astringent. *Martyn's Tournefort.*

16. Sedum; minus; a Rupe Sancti Vincentii. *Raii Synop.* 152.

17. Sedum; minus; teretifolium; alterum. *C. B. P.* 283. *J. B.* 3. 691.

18. Sedum; parvum; acre; apicibus albis.

19. Sedum; parvum; acre; flore luteo. *J. B.* 3. 695. *Raii Hist.* 2. 1041. *Synop.* 3. 270. *Tourn. Inst.* 263. *Boerb. Ind. A.* 286. *Illecebra*, Offic. *Illecebra minor, seu Sedum tertium Dioscoridis*, Park. Theat. 733. *Vermicularis, seu Illecebra minor acris*, Ger. *Emac.* 517. *Sempervivum minus vermiculatum acre*, *C. B. P.* 283. WALL-PEPPER.

Wall-Pepper, or small Stone-Crop, has its Stalks four or five Inches long, wholly covered with thick, fat, triangular, blunt Leaves, and on their Tops a few star-like, five-leaved, yellow Flowers, with several Stamina in the Middle. The Root is small and fibrous; it grows upon Walls, and the Tops of low Houses, and flowers in May and June. It has a very hot biting Taste, and therefore is called Wall-Pepper.

This is too frequently used in the Shops for the *Sedum minus*, and is sold for it by the Herb-Folks; but it having Qualities directly opposite to the other Sedums, and more apt to raise than to cure Inflammations, it ought not to be put into the *Unguentum Populeon*, nor into any other Medicine for it. This Stone-Crop has been found by Experience to be good

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for the Scurvy, both taken inwardly in Decoctions, and the Limbs bathed with it in Fomentations; and it is likewise commended against the King's-Evil. *Miller's Bot. Off.*

The acid Part of the natural Salt of the Earth seems to have let a corrosive Salt resembling the Spirit of Nitre, involved and softened by some Sulphur, escape into the Texture of this Plant. *Martyn's Tournefort.*

There is a third Kind of Sempervivum, which some call wild Purslane, or *Telephium*, and the Romans *Illecebra*. It has small, pretty thick and dense Leaves, like Purslane. It grows on Rocks, and is of a heating, acrimonious, and exulcerating Quality; a Cataplasin thereof, with Swine's Fat, dissolves strumous Swellings. *Dioscorides, Lib. 4. Cap. 91.*

The Juice extracted by means of some Liqueur, and given inwardly, excites Vomiting, and potently discharges gross, pituitous and bilious Humors; whence it is of surprising Efficacy in Quartans.

20. Sedum; minimum; luteum; non acre. *J. B.* 3. 695. *M. H.* 3. 471. *Sempervivum, minus, vermiculatum, inspidum*. *C. B. P.* 284.

21. Sedum; minus; circinato folio. *C. B. P.* 283. *Aizoon da Syphyllon*. Lugd. 1153.

22. Sedum; *Cepaea dictum*. *Tourn. Inst.* 263. *Boerb. Ind. A.* 287. *Cepaea*, Offic. Ger. *Emac.* 621. *C. B. P.* 288. *J. B.* 3. 679. *Raii Hist.* 1. 690. *Cepaea Matthioli*, Park. Theat. 727. BASE ORPINE.

It is cultivated in Gardens, flowers in Summer, and the Herb is in Use.

*Cepaea* is like Purslane, but has blacker Leaves, and a slender Root. The Leaves exhibited in Wine cure the Strangury, and the Scabies of the Bladder, but more effectually, if taken in a Decoction of the Roots of the *Asparagus*, called *Myocanthus*. *Dioscorides, Lib. 3. Cap. 168.*

23. Sedum; vulgari magno simile; minimum; foliolis acutissimis, confertissimè natis.

24. Sedum; Afrum; saxatile; foliolis Sedi vulgaris, in Rosam verè compositis.

25. Sedum; Alpinum; album; foliolis compaëtis. *C. B. P.* 284.

26. Sedum; pyramidale; elegantissimum.

27. Sedum; Alpinum; Coridis folio. *T.* 263.

28. Sedum; Hispanum; folio glauco acuto; flore albido. *Boerb. Ind. Alt. Plant. Vol. 1.*

This Plant acquires the Name of *Sedum*, à *sedendo*, "from sitting," because of its sessile Posture on Walls where it grows; or à *sedando*, "from allaying," because it allays or mitigates the Pains of Inflammations; *Sempervivum*, because it is always green Winter and Summer; *Vermicularis*, because its Leaves resemble Worms; and *Jovis Barba*, "Jupiter's Beard;" but for this last Appellation I can give no Reason.

This Plant abounds with a Juice of extraordinary Efficacy in all manner of cold Diseases. All the Species, except the first, agree in their Properties, being of an aqueous, nitrous, emollient and laxative Quality, mixed with something of Acidity, Austerity, and a slight Measure of Astringency. On this Account the Leaves stripped of their outer Membrane, and macerated in Water, are commended in burning Fevers, Inflammations, Gangrenes, and Suppurations of the Stomach and Intestines, for Aphthæ, and the Quinsy. The *Africans* give ten Ounces of the new-expressed Juice in a Dysentery, and with the same cure not only this Disease, but all pestilential and spotted Fevers. It is, also, a very good Plant for correcting the Malignity of the worst Kind of Ulcers. The bruised Leaves cure the Erysipelas, Corns in the Feet, and the Nodes of the Gout. Of the same is prepared an excellent Ointment for the Hemorrhoids. The nineteenth Species is as hot and acrimonious as the others are mild and gentle. There was in this Country a certain Empiric, who, with two Ounces of this Plant, infused in Milk or Beer, cured Quartans, Dropsies, and other chronical Diseases, by causing the Patients to vomit in a violent manner; under which, if the Disease proceeded from cold obstructing the first Passages, they recovered; but if there was an immoderate Heat in the Case, the Remedy proved mortal. It causes an Alteration in all the Humors, and is of very good Service in a slow Dropsy. It is highly commended in Pains of the Gout and Sciatica; tho' I should not venture to give it inwardly, because of its Acrimony. The former Species are of Service in Combustions and Cancers. *Hist. Plant. ascript. Boerhaave.*

SEDUM is also a Name for several Sorts of SAXIFRAGA and COTYLEDON; which see.

SEDUM AQUATILE. A Name in *Boerhaave*, for the ALIOIDES.

SEDUM MINUS FRUTICOSUM. A Name for the *Chenopodium; sedifolio minimo; frutescens; perenne.*

SEDUM PETRÆUM. A Name for the *Aizoon; Alpinum; hirsutum; luteum.*



# S E M

SEGAX. Dragon's Blood. *Rulandus*.  
 SEGITH. Vitriol. *Rulandus*.  
 SEL SERAPIONIS, & AVICENNÆ. The Name of a Fruit, of a bitter and acrimonious Taste. It is said to be produced near *Jerusalem*.  
 SELAA. A Node, or encysted Abscess. *Castellus* from *Forellus*.  
 SELACHIOS, σελᾶχιος. A cartilaginous Fish, or Fish whose Skin is cartilaginous. Of this Kind is the Skate, Ray, and many others.  
 SELAGINOIDES. A Species of Moss. See the Explication of Terms under the Article BOTANY.  
 SELAGO. A Species of Moss. See the Explication of Terms under BOTANY.  
 SELATUS. Quicksilver. *Rulandus*.  
 SELDONIUM ALCALI. *Paracelsus* describes this as something very readily dissoluble, and emitting a Tincture; but his Meaning is not understood.  
 SELENIACON. A Name for the Species of *Cyphi*, sacred to the Moon, and consisting of twenty-eight Ingredients. It is described by *Paulus Ægineta*, L. 7. C. 22. It was, also, a Name of a Sort of Amulet against the Epilepsy, worn by Children. It is derived from σελήνη, the Moon.  
 SELENITES. Offic. Charlt. Fols. 23. Kentm. 32. Worm. 56. Aldrov. Mus. Metal. 678. Boet. 396. Gesn. de Lap. 45. *Lapis specularis argenteus*, Cup. Hort. Cath. Supp. 252. *Crysellus Calcaria*, Mont. Exot. 14. THE SELENITE.  
 This is a rhomboidal, pellucid Fossil, divisible into thin *Laminae*. It is found in many Places, particularly near *Epsom Hills* in *Surrey*. It is said to agree in Virtues with the *Tellacea*, to be a Sweetner of the Blood, and to restrain Hæmorrhages. Externally it is used as a Cosmetic. In the Catalogue of Simples in the College-Dispensatory, it is confounded with the *Lapis Specularis*.  
 SELERI. See CELERI, and APIUM.  
 SELIBRA. Half a Pound.  
 SELINITES. An Epithet for Wine, impregnated with the Seeds of *Apium*. *Dioscorides*, L. 5. C. 74.  
 SELINUM MONTANUM. See APIUM.  
 SELINUM SEGITALE. A Name for the *Sium*; *arvensis*; *see Segetum*.  
 SELINUSIA TERRA. A Species of Medicinal Earth, mentioned by *Dioscorides*, L. 5. C. 174. This, he says, agrees with the *Chian* Earth in Virtues. That is best, which is shining, white and friable, and which readily dissolves when mixed with any Fluid.  
 SELIA TURCICA. A Sort of Cavity in the Basis of the Skull, formed by four Processes of the *Os Sphenoides*. See CAPUT.  
 SEMASIA, σημασία. The Access of a Distemper.  
 SAMBELLA. Half a Pound.  
 SEMELOTICE. That Part of Medicine which treats of the Signs of Health and Diseases.  
 SEMEN. A Seed. The four greater hot Seeds are those of Anise, Caraway, Cumin, and Fenil. *Fr. Hoffman* says Dill, instead of Caraway.  
 The four smaller hot Seeds are those of Bishops Weed, Anumomum, Apium, and Dancus.  
 The four greater cold Seeds are those of the Citrul, Cucumber, Gourd, and Melon.  
 The four lesser cold Seeds are those of Succory, Endive, Lettice, and Purslane.  
 That the five greater hot Seeds are of singular Use in preparing domestic Medicines, is sufficiently certain from Experience. We shall not here consider them apart, but only observe, that whether reduced to the Form of a Powder, boiled with Ale, or infused in warm Water, by reason of the Sulphur and Oil they contain, which are mild, friendly to Nature, and volatile, they are highly efficacious in correcting the Acrimony, and resolving the Viscidity of the Humours; as, also, in soothing all the Parts of the Body, however agitated or rack'd. Hence they are highly expedient in all spasmodic and convulsive Disorders; for they excellently alleviate Spasms, disperse Flatulences, and, at the same time, correct the Humours. For which Reason we recommend them in Colics, Coughs, Diarrhæas, and Gripes, especially those to which sucking Infants are subject, on account of the caustic Acrimony of the Milk, which discovers itself by the greenish Colour of the Excrements. *Hippocrates* frequently used Anise Seeds, and they are certainly a valuable Medicine, on account of their friendly Quality to the Stomach and Intestines; for this Reason *Hulmont* justly called them the great Reliever of the Intestines. A Decoction of these five Seeds with Chamomile Flowers, Oil of Sweet-Almonds, and a little Venice Soap, injected by way of Clyster, is of excellent Service in the most violent Disorders of Children, and excellently dispels their Flatulences, and relieves their Gripes. These five Seeds, also, whether used in a dry or liquid Form, provoke

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the Menfes and Sweat; cure the Hiccup, prevent Abortion, strengthen the Stomach in Vomiting and Hiccups; disperse Flatulences; expel Urine and the Stone; remove Hoarseness, and facilitate Labour, especially if the Steam of them is admitted to the Uterus. The Steam of a Decoction of Fennel surprisingly cleanses the Eyes, and strengthens the Sight. It is, also, beneficial in Deafness, as we are informed by *Gabelchoverus Centur.* 1. *Curat.* 6. in *Annotat.* A Decoction of Fennel is, also, good for increasing the Milk, as we are told by *Amatus Lusitanus*, in *Centur.* 6. *Curat.* 86. Nothing is more efficacious than the Seeds of Cumin for strengthening the relaxed Tone of the Intestines, and discharging Flatulences. And *Reinerus Solmader*, in *Lib.* 35. informs us from *Serapion*, that it is excellent for strengthening the Uterus, removing its Flatulences, and checking the Menfes and Fluor Albus. *Hoffman de Præst. Remed. Domest.*  
 SEMICONGIUS. Half a Gallon.  
 SEMICUPIUM. A Half Bath; or a Bath in which the Parts above the Navel only are immersed.  
 SEMIDALIS. σμιδαλις. Fine Wheat Flour.  
 SEMIFIBULEUS MUSCULUS. A Name for a Muscle of the TARSUS; called, also, PERONÆUS MEDIUS. See PERONÆUS.  
 SEMIMEMBRANOSUS MUSCULUS.  
 This is a long thin Muscle, partly tendinous, from whence it has its Name, and situated on the Backside of the Thigh, a little towards the Inside.  
 It is fixed by a broad Tendon, or long Aponeurosis in the irregular, obtuse, prominent Line, which goes from the Acetabulum to the Tuberosity of the Ischium, a little above the Insertion of the Semi Nervosus, and between those of the Gemellus Inferior and Quadratus, mixing some Fibres with the Triceps Tertius.  
 From thence it runs down fleshy, in an oblique Direction, behind the inner Condyle of the Os Femoris, below which it terminates in a thick Tendon, which is inserted in the posterior and interior Side of the inner Condyle of the Tibia, by three short Branches, the first or uppermost of which goes a little toward the Inside; the second more backward; and the third lower down. Before it is inserted, it sends off sometimes an Aponeurosis like that of the Biceps.  
 The *Semimembranosus* has the same Uses with the *Seminervosus*. It bends the Leg on the Thigh, and the Thigh on the Leg; it extends the Thigh on the Pelvis, and the Pelvis on the Thigh, and sustains the Pelvis when it is inclined forward. It differs in this one Thing from the *Sartorius*, *Gracilis Internus* and *Seminervosus*, that its Insertion is not on one Side, but behind the Joint; and for that Reason it is better disposed both to begin and continue the Flexion of the Leg, than they are. *Winslow's Anatomy*.  
 SEMIMETALLA. Semimetals, or Marcasites.  
 SEMINALIS. A Name for the *Polygonum*, or *Centodium*.  
 SEMINERVOSUS MUSCULUS.  
 This is a long Muscle, half fleshy and half tendinous; or like a Nerve, from whence it has its Name. It is situated a little obliquely on the posterior and inner Part of the Thigh.  
 It is fixed above to the posterior Part of the Tuberosity of the Ischium, immediately before, and a little more inward, than the Biceps. It is afterwards fixed by fleshy Fibres to the Tendon of the Biceps, for about the Breadth of three Fingers, much in the same manner as the *Coraco-Brachialis* is fixed to the Biceps of the Arm.  
 From thence it runs down fleshy towards the lower Part of the Inside of the Thigh, having a Sort of tendinous Interfection in the inner Part of its fleshy Portion. Having reached below the middle of the Thigh, it terminates in a small, long round Tendon, which runs down to the Inside of the Knee, behind that of the Gracilis, where it expands in Breadth.  
 It is inserted in the Inside of the upper Part of the Tibia, about two or three Fingers Breadth below the Tuberosity or Spine, immediately under the Tendon of the *Gracilis Internus*, with which it communicates. It has the same oblique Turn with the *Gracilis* and *Sartorius*, and sends off a like kind of Aponeurosis.  
 The *Seminervosus* bends the Leg, and may, also, bend the Thigh on the Leg. By its Insertion in the Tuberosity of the Ischium, it, also, extends the Thigh on the Pelvis, and carries it backward; and may, also, extend the Pelvis on the Thigh, when it has been inclined forward with the rest of the Trunk; and consequently prevent its being carried too far along with the Trunk, when we stoop forward, either standing or sitting. *Winslow's Anatomy*.  
 SEMIRHOMBUS. See HEMIIONON.  
 SEMIS. The Half of any Integer.  
 SEMISEXTUM. The same as HEMIIONON.

SE-



SEMISICILICUS. A Dram.

SEMISIDERATUS. Hemiplegic; that is, seized with an Hemiplegy.

SEMISPECULUM. An Instrument for dilating a Wound in the Bladder, in the Operation of Lithotomy, described by *Hildanus*, in his *Treatise de Lithotomia*. C. 15.

SEMISPINALIS COLLI, *five Transverso-spinalis Colli*.

This Name is given to all that fleshy Mass which lies between the transverse and spinal Apophyses, from the second Vertebra of the Neck to the Middle of the Back; the *Splenius* and *Complexus major*, which cover it, having been raised.

It is composed of several oblique converging Muscles, which may be divided into external and internal, and of these the external are the longest.

The external are fixed below, to the transverse Apophyses of the six, seven, eight or nine upper Vertebrae of the Back, by tendinous Extremities, which, as they ascend, become fleshy, and mix with each other. Their superior Insertions in the Neck are six in Number; whereof the first, which is tendinous, is in the seventh spinal Apophysis; the rest, which are fleshy, are in the five next spinal Apophyses.

The lowest of these external Muscles mix more or less by some communicating fleshy Fibres, with the *Spinalis, Longissimus*, and *semi-spinalis Dorsi*.

The internal are shorter and more oblique than the external, and partly covered by them. They are fixed, by their lower Extremities, to the transverse Apophyses of the three or four upper Vertebrae of the Back, and to the oblique Apophyses of the four or five lower Vertebrae of the Neck; and by their other Extremities they are inserted in the six spinal Apophyses of the Neck.

Some of these internal Muscles are very short, lying wholly between the spinal Apophyses, and the oblique or transverse Apophyses next them.

The *Semi-spinales* or *Transverso spinales* of both Sides acting together, extend the Neck upon the Trunk, to keep it from inclining forward in standing or sitting, and bend it backward. The *Semi-spinales* of one Side acting alone, produce the same Motions in an oblique Direction, and in that Case they are assisted by the inferior or vertebral Portion of the neighbouring *Splenius* under which they cross.

The *Semi-spinales* of both Sides may, also, serve for the Rotation of the Neck, but then the inferior *Splenius* of the opposite Side must assist them. This Motion is made in the ordinary Situation of the Neck, principally on the fourth and fifth Vertebra. They may, also, perform the lateral Inflections of the Neck, by assisting the *Longus Colli* and anterior vertebral Muscles of the same Side. *Winslow's Anatomy*.

SEMI-SPINALIS DORSI, *five Transverso-spinalis Dorsi*.

This is a fleshy Mass, which from all the spinal and transverse Apophyses of the Back and Loins, is extended in distinct Fasciculi over the Vertebrae themselves.

It is made up like that of the Neck, of several oblique converging vertebral Muscles, the uppermost of which is fixed below, to the third transverse Apophysis of the Back, and above to the first spinal Apophysis. The lowest is fix'd below to the third transverse Apophysis of the Loins, and above to the last spinal Apophysis of the Back.

They may be divided into external, which are first discovered, and Internal, which lie immediately on the Vertebrae. The external from the first Vertebra to the seventh inclusively, appear to be longer than the internal, which are covered by them. They may, also, be distinguished into those which go from one Transverse to several spinal Apophyses, and those which go from several Transverse to one spinal Apophysis.

The *Semi-spinales* or *Transverso-spinales* being oblique, converging, vertebral Muscles, are Assistants to the *Sacro-Lumbaris* and *Longissimus Dorsi*, which they cross on each Side. By this Decussation joined to the Multiplicity, and graduated Distribution of their Insertions, they increase the Strength of the other Muscles considerably, whether they act equally and uniformly with them, or alternately. The Lumbar *Semi-spinales*, called by the Ancients, *Musculus Sacer*, (See *SACER*.) because of their Insertions in the *Os Sacrum*, are more exposed to Motions and Strains than those of the Back, and are, also, larger and thicker. They are much better fitted than the *Sacro-Lumbares* for supporting the Pelvis on both Sides in walking, and on one Side, when we raise the Foot on that Side, and support ourselves on the other. *Winslow's Anatomy*.

SEMISSIS. The same as *SEMITIS*.

SEMITERTIANA. A Kind of complex Fever, which we call a *Semitertian*, and the *Greeks* *ἡμιτερτiana*, *Hemitritian*, and it deserves our careful Observation. It begins with a Horror, and goes off with a Sweat, yet not so as to leave the Patient entirely free from a Fever. But since it is complicated of an intermittent Tertian, and a continual Quoti-

dian, on one Day it is more exasperated, and molests the Patient with a Horror, and frequently with something of a Rigor, attended with bilious Vomiting or Stools, a burning Heat, and Exhalations of humid Vapours. On the other Day the Patient is rather sensible of a Cold than a Horror, and is not much afflicted with Heat or Thirst; the Pulse is more moderate, and the Fever more gentle on all Accounts; besides, on one Day may be observed two kinds of Fevers, on the other but one. A *Semitertian* Fever is indeed but rare, but where it is once settled, very dangerous. An exquisite *Semitertian* is, when the Supplies of peccant Matter for the intermittent Tertian and continual Quotidian are nearly equal; otherwise there cannot be a pure *Semitertian*, and consequently the Disease, as it is thought, will the more easily give way to Remedies. *Lomii, Med. Obs.*

Among the epidemic Fevers of the intermittent and malignant Kind, we (in Practice) frequently meet with that Species which consists of an intermittent Tertian, and a Quotidian of the continual kind, for which Reason it is by the *Greeks* called *ἡμιτερτiana*; and by the *Latins*, *Semitertiana*.

This Species of Fever generally seizes the Patient, in the Forenoon, with a violent Cold and Horror, and a contracted Pulse. This State is afterwards succeeded by an Heat, which lasts for some Hours, is accompanied with a frequent Pulse, and remits without being totally removed upon the Eruption of the Sweat. Towards the Evening the Heat is rather increased, after a gentle Refrigeration; and next Day the Disorder is milder, and accompanied with Thirst, till about the Evening, after a slight Horripilation, it again becomes more violent. But on the third Day, the Horror again seizes the Patient, and is succeeded by a more intense Heat, whilst the State of the Disorder is the same it was on the first Day. So that there is always present a kind of growing Fever, the Exacerbation of which happens towards the Evening; and on the third Day, in the Morning, this Exacerbation is most conspicuous, and accompanied with a Rigor. Besides, the Strength is impaired, the Appetite rendered languid, the Sleep defective, and the Urine thin and crude; whereas, after the Paroxysm of a Tertian, it is thick and high-coloured. In Coughing a small Quantity of crude Matter is spit up. This Species of Fever is, also, frequently accompanied with a Pain of the Back and Abdomen, which latter is, also, tumid. Some, upon the Approach of the Tertian Paroxysm, are afflicted with a Nausea and Cardialgia; others vomit; others fall into Deliquiums; and others become absolutely delirious.

This Fever is almost unknown in some Parts of *Europe*, the Inhabitants of which generally take it for a malignant intermittent Fever; but the former greatly differs from the latter, since it is neither contagious, accompanied with exanthematous Efflorescences, nor attended with so considerable a Loss of Strength. Besides, it has every third Day a conspicuous Exacerbation accompanied with Horror.

Others, in like manner, unjustly confound a *Semitertian* with a continual Tertian; for the latter, otherwise than in the former, has its Exacerbation only on the third Day, but not in the Evening; nor is it wholly continual; but tho' it at first seizes with a continual Heat, yet, on the third Day, it generally loses its Violence, and passes into an intermittent Tertian.

Nor is a *Semitertian* to be confounded with a double Tertian; for tho' the latter seizes every Day, yet the Paroxysms correspond to each other, and the Fever itself perfectly intermits; whereas, in a *Semitertian*, there is absolutely no Intermission, but a Remission. The Paroxysm, also, happens about the Evening, and is always double on the third Day.

A *Semitertian* is, therefore, composed of two Fevers, and must, therefore, have a double Focus, and a double Cause; that is, the Source of the continual Fever in the Mesentery, in consequence of the intercepted Circulation of the Blood thro' its Structure, and its consequent inflammatory Stagnation in the contiguous nervous Coats. But the violent Paroxysm happening on the alternate Days, has, as well as a Tertian, its Seat and Cause in the Intestines, and especially in the Duodenum; for to the winding Cavity of this Intestine, the lymphatic, bilious, and corrupted Humors, in consequence of the Disorder of the Mesentery, are conveyed from the Glands, the Liver and Pancreas; as also crude Juices from the Stomach, which constitute a morbid Focus; which, mixing with the Blood, and being conveyed to the nervous Membranes of the Spine, induces a preternatural febrile Motion.

Among the Things which have a Tendency to generate a *Semitertian*, we may reckon all those Substances and Circumstances which render the Juices thick and impure, and especially fill the Prime Vire and Vessels of the Mesentery with Sordes. Hence *Semitertians* are most generally incident to those, who, neglecting a salutary Regimen, eat liberally of



sweet, acid, fermentable Aliments, and farinaceous Substances fried with Butter, Sugar, and Eggs; and to those who lead an idle and too sedentary Life; who drink too little; who are too great Lovers of sweet Wines; or who indulge the Passions of the Mind, especially Sorrow. Semitertians are, also, readily incident to Persons after a Recovery from acute Disorders; to those who are costive; to those who frequently use drastic Purgatives; and to such, as have the menstrual or hæmorrhoidal Discharge suppressed. These Fevers are, also, less frequent at other Seasons than in the Autumn, the fruitful Source of terrible Fevers, on account of the Variety and Inequality of the Weather, which is highly unfriendly to salutary Perspiration. Semitertian Fevers, also, frequently happen to those, who, when overheated, greedily drink cold Liquors, or who, when sweating, sit down in moist Places.

Semitertians are observed to be more frequent in some Countries than in others. Thus *Galen*, *Spigelius*, and *Baglivi*, inform us, that they rage more in *Italy* than in other Climates. And certainly, in that Part of the World, the Heat, during the Day, generates many acridcrementitious Sordes, whilst the cold Air of the Night hinders the Exclusion of these; and the cold Drink, of which they are so very fond as to prepare it by putting Ice into it, occasions, that the Juices in the Mesentery, where the Resistance is small, and the Circulation languid, as it were, stand still, and conceive an inflammatory Stagnation. And thus a continual Fever is generated, which is changed into a Tertian, by the corrupted Juices falling from the Mesentery to the Intestines. The like happens in *Hungary*, where a similar State of the Air, and a liberal Use of sweet and spirituous Wines, frequently excite Semitertians.

Since, therefore, a Semitertian, besides the common Cause of Intermittents in the Primæ Viæ, has, for a Foundation, an Inflammation, and a continual Disposition never to admit of a great Remission of the Symptoms, nor of a due Time for recovering the Strength, it is of a very dubious Nature, and far more dangerous than a simple Intermittent.

For this Reason, its Progress is quick, since, for the most part, it terminates on the ninth or thirteenth Day, either in Health, some other Disease, or Death.

When it is long protracted, the Inflammation either comes to a Suppuration, and the Disorder is changed generally into an hectic or slow Fever; or when there is a violent Obstruction of the Mesentery, it terminates in a Dropsy; or, which happens more rarely, when the Primæ Viæ are filled with Sordes, it ends sometimes in a simple, and sometimes in a double Intermittent.

But when the Sweat not only breaks out in the Decline of the Paroxysm, but also on the seventh Day, which is critical; or if, after this Day, the Intestines are put into a Commotion, and a bilious, pituitous, or even a bloody Flux, is produced, it is a good Sign, and prognosticates the Solution of the Disease; or if there happen violent Pains of the Abdomen, which are increased at certain stated Hours, the Disorder is resolved by them, or afterwards terminated by a subsequent sanious and purulent Diarrhæa, or an Evacuation of a large Quantity of black Blood by Stool.

On the contrary, when none of these Circumstances happen, but rather a Heat about the Præcordia, a Tension and Pain in the whole Region of the Stomach, a Vomiting, a Hiccup, a Restlessness, a Tossing, and a Trembling of the Hands, are perceived, they are bad Prognostics, and indicate that the Inflammation has spread itself farther even to the Stomach.

Those who die of a Semitertian are taken off under the Access of a violent Paroxysm, which keeps the Type of a Tertian, the Inflammation, in the mean time, being far diffused and converted into Putrefaction. Thus *Spigelius*, in his *Lib. de Semitertiana*, Cap. 14. informs us, that he always found this to be the Cause of the Death of such Patients, in the following manner: "When, says he, I reflect upon what I have observed, in dissecting those who have died of Semitertians, I can ascribe their Death to nothing else but putrid Stagnations in the Vessels; for in the Carcasses of such Persons, I found Inflammations formed of bilious and pituitous Blood, about the concave Part of the Liver, in the Stomach, in the great and small Intestines, in the Mesentery, Omentum and Spleen, and often in one or more of these Parts, and sometimes in them all; and a supervening Gangrene or Sphacelus, tho' perhaps small, was found to be the Cause of their speedy Death."

#### THE CURE.

The two principal Intentions to be pursued in the Cure of a Semitertian, are,

1<sup>o</sup>. With all Expedition either to disengage or hinder the farther spreading of the inflammatory Stagnation lodged in

the Coats of the Mesentery and Intestines, and exposing the Patient to imminent Danger.

2<sup>do</sup>. To correct and gently evacuate the scibile Matter, during the Intermittion, having a due Regard, at the same Time, to the critical Efforts of Nature.

The former of these Intentions is excellently well answered, by diaphoretic and gently nitrous Powders exhibited frequently in small Doses. Thus;

Take of the Cerufs of Antimony, of prepar'd Mother of Pearl and Crabs Eyes, each one Dram; of the Solution of Crabs Eyes, and depurated Nitre, each half a Dram; reduce them to a Powder, of which, every three Hours, fifteen Grains may be exhibited in a Decoction prepared of two Ounces of the Roots of Vipers-Grafs, one Ounce of the Shavings of Hartshorn, one Ounce of Currans, and half an Ounce of the Roots of Succory, boil'd for half an Hour in four Quarts of Water.

The same Intention is answered, by exhibiting every three Hours a Spoonful or two of the resolvent and diaphoretic Mixtures, prepared of the pectoral and analeptic Waters of Lily of the Valley, Galangals, Carduus Benedictus, Vipers-Grafs, and black Cherries, with the distill'd Vinegar of Crabs Eyes, diaphoretic Antimony, the Mixture Simplex, and the Syrup of Carduus Benedictus.

By Means of these, the Sordes of the Primæ Viæ, which produce the Disorder, being corrected and diluted, are best evacuated by Solutions of Manna, with a due Portion of Cream of Tartar, Rhubarb, Raisins, and Sal Polychrestum; for these, without any Commotion of the Blood, Irritation of the nervous Parts, or Loss of Strength, cleanse the Intestines, and greatly contribute to remove the Infarctions of the Mesentery. This Intention is, also, answered by balsamic Pills, prepared of bitter Extracts, resinous and balsamic Gums, and depurated Aloes, together with the precipitating nitrous Powder, moderately but frequently used. If the more subtile Parts of the Sordes, are, by an increas'd Perspiration, to be eliminated through the cutaneous Pores, the Essence of Scordium mixed with an equal Quantity of the anodyne mineral Liquor, is of all other Medicines the most safe and efficacious.

All Cures are to be so managed, as never to disturb or interfere with the critical Efforts of Nature, but rather to assist them when defective, and moderate them when excessive.

Hence, 'tis highly prejudicial to exhibit Purgatives, especially in the Beginning of a Semitertian, since, by that Means, the unprepared Matter is agitated, the Inflammation increas'd, and the Disease dispos'd to a speedy, tho' a fatal Event.

Saline Deterfives exhibited by themselves, are not to be us'd in a Semitertian, especially in large Doses, except antimonial Nitre, to which, and the Sal Polychrestum, *Baglivi* justly ascrib'd so much; for these are possess'd of an aperient, diuretic, and gently laxative Quality, and may sometimes be commodiously exhibited to the Dose of fifteen Grains, in a sufficient Quantity of some proper Decoction.

But if a Semitertian seizes a Person who is costive, or if he is long costive during it, his Body is only to be render'd soluble, by Clysters prepared of Paregoric and emollient Substances, the carminative Seeds, and *Venice* Soap, that thus the Primæ Viæ may be freed from the excrementitious Sordes; for if this is neglected, Nature seeks a Way upwards, and excites a Vomiting, especially when the biliary Ducts in the Liver are turgid with an acrid Bile.

In the Decline of the Fever, the Physician is to follow the Tendency of Nature, which often terminates the Disorder by a Flux, so that on this Occasion the above-mentioned Laxatives and balsamic Pills are commonly used.

In a Semitertian, the Physician is to be very cautious in exhibiting Emetics, lest he should create a Vomiting, or Hiccup, or dispose the Stomach to an Inflammation: But if the peccant Matter is to be evacuated by Vomit, in consequence of the Tendency of Nature that Way, the Intention is sufficiently answered by drinking tepid Water with Salt, or a very gentle antimonial Stimulus.

In a Semitertian, Venesection is not proper, except there is a violent Plethora, and an intense Heat in Persons as yet vigorous, and labouring under a Suppression of critical Hemorrhages; for in this Case, Venesection is absolutely necessary, in order to prevent a mortal Inflammation of the Intestines; but it is to be us'd in the very Beginning, since the sooner a proper Quantity of Blood is taken away, the sooner the Cure is accomplish'd.

The Patient is, also, carefully to avoid all hot Substances, alexipharmic Essences, bezzards,uncture, a hot Regimen, and



and large Quantities of hot Liquors; for by Means of these, the Heat is increas'd, the critical Discharge of the Fomes of the Disease through the Intestines is disturb'd, and the Strength impaired by profuse Sweats.

Astringent; too fix'd, earthy, testaceous Powders, and Peruvian Bark, are not to be us'd in a Semitertian; for Baglivi observes, that by Means of these, either mortal Inflammations, or slow and hectic Fevers have been brought on.

Though the Patient should be afflicted with an exquisite Pain of the Abdomen, and frequent Stools, he is nevertheless to abstain from Sedatives, and is only to be reliev'd by anointing his Abdomen with spirituous and corroborative Liniments, whilst the Tumult and Commotion is to be check'd by an internal Exhibition of Diaphoretics.

For ordinary Drink, the most proper is the Decoction before mentioned; as, also, a Decoction of Oats prepared in the following Manner:

Take of clean wash'd Oats, one Pound; of the Roots of Succory, Sarsaparilla, and Vipers-Grass, each one Ounce; of the Flowers of red Poppy, six Pugils; of antimoniated Nitre, half an Ounce; Leaves of Scabious, half an Handful; and of pure Nitre two Drams; boil them in five Quarts of common Water, to a Consumption of a third Part, and edulcorate with Syrup of Carduus Benedictus, wild Poppy, or Citron Juice.

In Semitertians, I have, also, found happy Effects produced by Decoctions of Chamomile Flowers, and the Tops of Yarrow, or by Extracts prepared from these; for such Decoctions and Extracts safely alleviate the Pains, especially of the hysteric and complicated Kind, and, at the same Time, by their Bitterness, prove excellent antiscorbutic Medicines, and restore the due Tone of the Parts.

As no Fever more readily recurs than a Semitertian, so the Patient is, after it, carefully to avoid the Things already enumerated, as the procolartic Causes of the Disorder. All Things are to be us'd temperately; the Body is to be kept soluble by mild Laxatives; the Increase of Crudities is to be prevented by Stomachics; and, which is of all other Circumstances the most important, the Perspiration is carefully to be kept free and unobstructed; for as in all Fevers, so, also, in those of the semitertian Kind, the Relapses are far worse and more obstinate than the original Disorder.

These are the general Precepts, founded on Reason, and supported by the Indications of Nature, by the Observation of which the Cure may be judiciously attempted, and successfully perform'd. But the particular Method is to be suggested by the Sagacity of the Physician, which is to direct him to the Order, Dose, Time, and Use of proper Medicines, which being the same with those employ'd in the Cure of continual quotidian, tertian and quartan Intermittents, may be seen under these Articles. *Frederic Hoffman.*

**SEMIVERBERATORIUS IGNIS.** A Sort of reverberatory Fire, which only surrounds the Bottom of the Vessel.

**SEMOTIM.** Achors, or Tincæ. *Castellus* from *Valefcus de Taranta.*

**SEMPERVIVUM.** See **SEDUM.**

**SEMUNCIA, or SEMIUNCIA.** Half an Ounce.

**SENA.** The same as **SENNÄ.**

**SENDANEGUM.** The *Lapis Hematitidis*, Blood-Stone. *Rulandus.*

**SENECIO.**

The Characters are;

The Calyx is monophyllous, cylindrical, multifold, very slightly squamous in the lower Part, of a conic Figure when the Flower is fallen off, and when it is ripe, generally bending downwards.

*Boerhaave* mentions ten Species of *Senecio*, which are;

1. *Senecio*; minor; vulgaris. *C. B. P.* 131. *Tourn. Infl.* 456. *Boerh. Ind. A.* 117. *Erigeron*, *Senecio*, *Offic. Senecio vulgaris*, *Park.* 671. *Raii Hist.* 1. 291. *Synop.* 83. *Senecio vulgaris* five *Erigeron*. *L. B.* 2. 1041. *Erigeron*, *Ger.* 217. *Emac.* 278. **GROUNDSEL, OR SIMSON.**

Groundsel has a small, stringy Root, full of Fibres, from which springs round, succulent, striated Stalks, which are shorter or taller, according to the Soil it grows in, and frequently of a reddish Colour. The lower Leaves are about two Inches long, and half an Inch broad, cut usually into five Jags or Sections, whereof the last is usually tripartite. The Leaves which grow on the Stalks are set on with a broad Base almost encompassing them: The Flowers grow on the Tops of the Branches, without any Petala, or Border, consisting only of fistular, yellow Flowers, growing in a green striated Calyx, which after turns into a Down. It

grows on Banks, and Walls, and amongst Rubbish, flowering the greatest Part of the Year.

The Juice of this Herb taken in Ale, is accounted by some a gentle Vomit, and of Use to help Pains in the Stomach, and evacuate Choler, and to help the Jaundice: It likewise destroys Worms. Outwardly apply'd, it is useful in Scrophulous Tumors, and Inflammations of the Breast, and helps scald Heads. *Miller's Bot. Off.*

It has an herby Taste, a little inclining to acid; it gives a pretty deep red Colour to the blue Paper.

By the chymical Analysis, it yields, besides several acid Liquors, a great deal of Oil and Earth, no volatile concrete Salt, but a little urinous Spirit; so that it is probable its Salt may resemble that of Coral, being involved with a great deal of Sulphur, and mixed with a little Sal-ammoniac.

Groundsel is emollient, lenifying and resolving; two Ounces of its Juice kills Worms, and eases the Cholic; the whole Plant is used in the ordinary Decoction of Clysters, and in the Cataplasms for assisting Suppurations. A Cataplasin of it boiled in Milk, or fried with fresh Butter, is good for the Gout, Piles, and dissipates curdled Milk in the Breast. *Martyn's Tournefort.*

The Juice taken in Beer, or the Decoction thereof with Currans or Honey, is a gentle Vomit, as we are taught by daily Experience. *Tragus* says it is rarely taken inwardly; others write that it is good in many Cases thus administered, for Instance; in the Cholera Morbus, Jaundice, a hot Dilemperature of the Liver, Worms, Vomiting, and Spitting of Blood, Sciatic Pains, and the Fluor Uterinus. Outwardly, it is of Use in Inflammations of the Breast, Scald Heads, Strumæ, Pain of the Stomach, Stoppage of Urine, Gout and Wounds.

It is very likely to be good for the Worms, because our Farriers give the expressed Juice thereof to Horses, for the Worms of the Stomach and Intestines, commonly called *Bottes*, whose Effects are suddenly fatal. *Raii H. P.*

2. *Senecio*; *Aegyptius*; folio *Matricariæ*. *Ind.* 40. *Jacobæa Aegyptia folio senecionis, multiflora.* *Vail.*

3. *Senecio*; *Jacobææ* folio. *M. H. B.* 309. *Jacobæa vulgaris, laciniata.* *C. B. P. M. H.* 3. 108. *Erigeron majus.* *Dod.* p. 641.

4. *Senecio*; *Africanus*; altissimus; *Blattariæ* vel *Hieracii* folio. *Schol. Bot. Par. Bat.* 226.

5. *Senecio*; *Africanus*; folio retuso. *H. C. Conyza Africana, Senecionis flore, retusis foliis.* *H. L. App.* 661. *Pseudo-Helichrysum frutescens, Africanum, retusis foliis viridibus, flore luteo, nudo.* *M. H.* 3. 90.

6. *Senecio*; *Africanus*; arborescens; folio ferrato. *Conyza Africana, humilis, foliis angustioribus, nervosis, floribus umbellatis.* *T.* 455. *Eupatorium Indicum, flore albo.* *Barth. Ac. Hafn. T.* 11. 57.

7. *Senecio*; *Virginianus*; arborescens; *Atriplicis* folio. *Par. Bat.* 225. *Etichryso affinis, Virginiana, frutescens, foliis Chenopodii glaucis.* *Plukn.* 27. *Conyza Virginiana, Halimi folio.* *T.* 455. *Pseudo-Helichrysum Virginianum, frutescens, Halimi latioris foliis glaucis.* *M. H.* 3. 90.

8. *Senecio*; *Africanus*; arborescens; folio Ficoidis. *Commel. Rar.* 40.

9. *Senecio*; *Asiaticus*; *Jacobææ* folio; radice lignosa; *China Officinarum dicta nobis Commel. Plant. usu.* (ed. 1724.) 94. *Ind. Med.* 35. *Boerh. Ind. A.* 117. *Pseudo-China, China supposita.* *Offic. Senecio Madraspatanus Rapi folio, floribus maximis, cujus Radix a nonnullis China dicitur;* *Pet. Mus.* 680. *Hort. Elh.* 345. *Hieracio similis India Orientalis umbellatis floribus, radice crassa & carnosa.* *Pluk. Mant.* 102. *Raii Hist.* 3. 140. *Parin Chakka, Aët. Philosoph.* *London.* N<sup>o</sup>. 274. p. 943. **BASTARD CHINA.**

It grows in the Kingdom of *Malabar.*

This is the Plant which some Years ago was sent to the *English East India Company* at *London*, under the Name of *Parin-Chakka Malabarica*, by *Samuel Brown.* The Description of it by *Dr. Dillenius*, in his *Hortus Elthamensis*, is as follows:

"This Plant is here [in *Madraspatam*] called *China Root*; but it is very different from that which you call *Spinosa* [that is, *Petiv.*] Mr. *Ingram* of *Newcastle* was cured by it of a Hectic Fever, under which he had laboured many Years. It is two Feet in Height, and has a Root like that of *China*: If Experience shall supply me with any further Observations, I will take Care to inform you." Some Specimens of this Plant were presented by the Company to the Royal Society at *London*, and published in the Philosophical Transactions for the Year 1702, N<sup>o</sup>. 274. with Observations. A few Years after the famous *G. Cuvier*, M. D. was presented with the same Plant, and published a Description of it in *Hort. Medic. Angliæ*, under the Name of *Senecio Asiaticus, Jacobææ folio, Radice lignosa, China Offic. dicta*; "the *Senecio* of *Asia*, with a Leaf like that of the *Jacobæa*, and a woody Root, called the *Corn* of the Shop."



"Shops," with the following Note; "I had the Knowledge of this Plant from that skilful Surgeon *Andreas Hammel*, who brought it with him from the *East Indies* into his own Country." This gave Occasion to the Authors of the *Catalogus Simplicium*, in the *Pharmacop. Londin.* and the *Indices Medicamentorum* in the *Pharmacop. Paris.* to commit a Mistake, in improperly setting down this *China of the Shops* for the *Root of the Plant*.

The famous Botanist *Switsen* sent me a Figure with a Description of the *Japonefe China*; but this is quite another Plant from what we are speaking of. Its Root indeed is very thick, as in the other; but then it is also tuberous, which is otherwise in the *Senecio*, and is a scandent Plant, like the *Clematites* of *Canada*, or Ivy, or Briony, which last it most resembles. I imagine that our *Senecio* is not so penetrating as to cure the Leprosy; for it is better qualified for an Emollient than an Expeller. But the *Japonefe* is far more acrimonious, so as perhaps to be sufficient for the Cure of the *Lues Venerea*, as it is said of the Root of *China*, tho' I never, as yet, saw any such Effect performed by it. This Root is very dear, and for that Reason very often adulterated; for when it is corroded, and exhausted with Age, they fill up the Perforations, and sell it for good and sound; and therefore I never prescribe it before Examination, for there is no trusting to it unseen. *Hist. Plant. ascript. Boerhaave.*

10. *Senecio*; *montanus*; *altissimus*; *Limonii folio*. *Vaill. Conyza, montana, foliis longioribus serratis, flore sulphureo albicante.* *Comment. Ac. Reg. Soc. Boerb. Ind. Alt. Plant. Vol. 1.*

This Plant is commended for its singular Efficacy in Inflammations of the Fauces, the Juice being used with Oxycras in a Gargarism; it is recommended, also, for scirrhus Tumors. A certain Botanist, *Peter van Hoy*, by Name, told me that all the *China Root* brought from the *Indies* was the Root of this Plant, and that its thick Root is used by the *Chinese* in Decoction, as a general Purger of the Blood, and they say that it cures the Leprosy; and it must be granted, that these Virtues do in some Measure belong to this Plant. *Hist. Plant. ascript. Boerhaave.*

**SENECTA ANGUIUM.** The *Exuviae*, or Sloughs of Serpents. A Decoction or Infusion of these is recommended against Pains of the Ears, Teeth, and Eyes. Some superstitious Women tie them about their Wastes, in order to prevent a Miscarriage, and about their Thighs, to accelerate Delivery.

**SENELLA.** The Hawthorn.

**SENEMBI.** An *American* Lizard, about four Foot long, and half a Foot in Thickness. Certain Stones found in the Head of this Animal, are esteemed, by the Inhabitants, good for the Stone in the Kidneys and Bladder, taken in the Quantity of a Dram.

**SENICA.** A Sort of Gum. See **ACACIA SILIQUIS COMPRESSIS.**

**SENNA.**

The Characters are;

It has a rosaceous, pentapetalous Flower; the Pod is flat, incurvated and bivalve, and the Seeds are like Grape-Stones, and separated from one another by small Partitions.

*Boerhaave* mentions seven Sorts of *Senna*, which are;

1. *Senna*; *italica*; *foliis obtusis*. *C. B. P. 397. Tourn. Inst. 618. Boerb. Ind. A. 2. 57. Senna Italica*, *Park. Theat. 225. Raii Hist. 2. 1792. Ger. 1114. Senna foliis obtusis*, *Ger. Emac. 1207. Senna Florentina*, *J. B. 1. 377. ITALIAN SENNA.*

This is distinguished from the true *Senna*, by the Largeness and Roundness of its Leaves. This Leaf is, also, much thinner, and more brittle than the other. It is a very weak Cathartic, but gripes violently, and therefore is seldom used. *Geoffroy.*

2. *Senna*; *Alexandrina*; *five foliis acutis*. *C. B. P. 397. Raii Hist. 2. 1742. Tourn. Inst. 618. Boerb. Ind. A. 2. 57. Senna Alexandrina*, *Offic. Senna Orientalis*, *Ger. 1114. Emac. 1247. J. B. 1. 377. Senna Alexandrina*, *Park. Theat. 225. ALEXANDRIAN SENNA.*

*Senna* is a shrubby Plant, having many woody Stalks arising to be two or three Foot high, full of winged Leaves, composed of three Pair of Pinnæ, with an odd one at the End, which are oval and sharp-pointed; the Flowers are yellow, five leaved, full of purplish Veins, with several crooked Stamina in the Middle. The Seed, which is of a yellowish, green Colour, flat, and in Shape like a Grape-Stone, is inclosed in a broad flat membranous Bladder, sticking so close together, that they are with Difficulty parted. *Senna* grows in *Egypt*, *Arabia*, and other Parts of *Turkey*; the best comes from *Alexandria*, and ought to be of a pale, yellowish, green Colour, not broken, but free from Stalks, and of a pleasant flesh Scent.

*Senna* is a Purging Medicine, of frequent Use, being one of the milder Sort of Cathartics, yet working pretty briskly, and carrying off cholic and phlegmatic Humours out of the Stomach and Bowels; but being somewhat griping, and of a nauseous Taste, it ought to be corrected with Spices or other Carminatives.

Official Preparations of *Senna* are, the *Decoctum Sennæ*, the *Syrupus Rosarum cum Senna*, the *Pulvis Senna Compos. major, et minor.* *Miller's Bot. Off.*

*Geoffroy* remarks, that this is the true Oriental *Senna*, smoother to the Touch, and not so green as that of *Tripoli*, and its Infusion is of a pale Colour. The Leaf is of a pretty strong Consistence, and shaped like the Point of a Spear. This is the best Sort of *Senna*. It purges Phlegm in a particular manner; but as it is subject to gripe, it ought to be given with Caution to those who have weak Viscera, or are of an inflammatory Habit of Body. It is usually mixed with Carminatives, such as Coriander Seed, Cinnamon, &c. or more effectually with alkaline Salts. It ought to be well cleansed from its Stalks, and then the Dose in Substance is from a Scruple to a Dram; and in Infusion, from two Drams to half an Ounce. Some have endeavoured to correct *Senna* with the *Scrophularia magna aquatica*; but that is now left off, common Tea having the same Effect. Some Physicians order *Senna* by the Name of *Folia Orientalia*.

The Follicules or Fruit of the *Senna Tree* purge in a less Degree than the Leaves. The common Dose is from three to six Drams in Infusion or Decoction. *Geoffroy.*

*Senna* is a very usual Purgative, proper for eliminating hot and serous Humours; and, consequently, yellow Bile and Phlegm from the Head, Liver and Spleen. Because it is of a hot and drying Quality, it is to be corrected by the Flowers of Violets and Borrage, and by Prunes; and because it is flatulent, and might prove hurtful to the Stomach, it is to be corrected with Cinnamon, Galangals and Ginger. *Dale from Schroder.*

#### DECOCTUM SENÆ.

Take of the Leaves of Alexandrian *Senna*, one Ounce and a half; of the Seeds of the lesser Cardamons, two Drams; and of Salt of Tartar, three Drams: Infuse the whole in one Pint of boiling Spring Water, and strain it off for Use.

#### PULVIS DIASENÆ.

*Compound Powder of Senna.*

Take of *Senna* Leaves, and Cream of Tartar, of each two Ounces; of Cloves, Cinnamon, Galangal, and Seeds of Bishop's Weed, of each two Drams; of Diagrydium, half an Ounce. Make them into a Powder.

This is the *Pulvis Sanctus* of *Brasavolus*, and is preferable to either the *Pulvis Sennæ Compositus major*, or the *Pulvis Sennæ minor Compositus*, as the Quantity necessary for a Dose is much less, and therefore easier to be taken in a Bole or Mixture. Its Dose is from one Scruple to one Dram.

**PULVIS SENÆ COMPOSITUS MAJOR.** See **PULVIS.**

**PULVIS SENÆ MINOR COMPOSITUS.** See **PULVIS.**

#### SYRUPUS ROSACEUS SOLUTIVUS CUM SENÆ.

*Solutive Syrup of Roses with Senna.*

Take of *Senna* Leaves, picked clean, six Ounces; of Caraway and sweet Fennel Seeds, of each three Drams. After these are first sprinkled over with white Wine, let them be steeped in three Pints of an Infusion of Damask Roses for the space of two Days; then strain the Liquor, and boil it up into the Consistence of a Syrup, with two Pounds of white Sugar.

This is in the new Dispensatory of the College exactly as in the *Syrupus à Succo Rosarum*; but therein are also many other solutive Syrups of Roses, with Agaric, Hellebore, &c. which are very justly expunged here.

3. *Senna*; *orientalis*; *fruticosa*; *Sophora dicta.* *Sophora Indica Orientalis*, *Brayn. Prodr. 1. 51. Galega affinis, Sophora dicta*, *C. B. P. 352. Securidaca Egyptia*, *Park. M. H. 2. 78. Ponnam Tangera.* *H. Mal. 2. 101. Escapathi, altera. Hernand. 376.*

4. *Senna*;



# S E P

4. Senna ; Occidentalis ; odore Opii virofo ; Orobi Pan-  
nonici foliis mucronatis glabra. *H. L. Cassia Americana, fœ-  
tida, foliis oblongis glabris.* T. 619. *Pajomirioba*, Pisonis.  
185.

5. Senna ; Occidentalis ; odore Opii virosissimo ; foliis E-  
buli hirsutis.

6. Senna ; Occidentalis ; foliis Ebuli acutis, glabris ; odore  
minus virofo.

7. Senna ; Occidentalis, odore Opii minus virofo ; foliis  
glabris obtusis majoribus. *Boerb. Ind. Alt. Plant. Vol. II.*

One Dram, or half an Ounce of the first and second Spe-  
cies, made into an Infusion, is an excellent Purge ; but now  
disused, on account of the nauseous Taste, and the Gripes,  
they produce. The Gripes are removed by an Addition of  
Fennel-seeds, and the nauseous Taste by Figwort. The *In-  
dians* put the bruised Leaves of the fourth and fifth Species  
into the Waters, and by that means catch the Fishes, as it  
were, sleeping near the Surface of the Water. These Leaves  
are also said to alleviate Pain. *Hist. Plant. ascript. Boer-  
haave.*

Besides the foregoing Species of *Senna*, *Geoffroy* mentions  
the two following.

1. SENNA TRIPOLITANA. This Sort is greener,  
larger, rougher, and of a more disagreeable Smell than the  
common Senna. It does not yield so much by Infusion ; that  
is, a greater Quantity is required to make the Infusion of equal  
Strength ; but it is of a greener Colour.

2. SENNA DE MOCHA. The Leaves of this Kind  
are longer and narrower than those of the common Sort ;  
its Smell stronger, and it gripes more violently. It is not  
used in this Country.

SENSIBILIS, αἰσθητός, sensible ; is applied to whatever is  
capable of making an Impression on the Senses. *Galen, de  
Dign. Pulf. Lib. 3. Cap. 1.*

SENSIFICUS, αἰσθητικός, sensific ; according to the best  
Philosophy, is the proper Epithet of the Nerves of the ex-  
ternal Senses, which convey the animal Spirits, as the effi-  
cient instrumental Cause, to the sensory Organs. *Galen, de  
Hip. à Plat. Decr. Lib. 7. Cap. 5.*

SENSIO, SENSATIO, αἰσθησις, is properly spoken of ac-  
tual Sensation, which consists in the Perception of any sen-  
sible Thing, affecting and causing some Alteration in the Or-  
gan of Sense.

SENSITORIUM. The same as SENSORIUM.

SENSORIUM, αἰσθητήριον, according to the ancient Hypo-  
thesis, the Instrument of any Sense. *Galen, de Odor. Instr.  
Cap. 5.* Agreeably to the same Doctrine, *Sensorium commune*,  
πρῶτον αἰσθητήριον, the common Sensory, is what receives the  
Impressions of all sensible Objects, conveyed to it by the  
Nerves of each particular Organ of Sense, and consequently  
is the immediate Cause of Perception. This Office is, by  
Dr. Willis, assigned to the striated Parts of the Brain, and  
by *Des Cartes*, to the *Glandula Pinealis*.

SENSUS EXTERNI. The *External Senses*, are the  
Means, or Instruments, of external Sensation, and are com-  
monly reckoned five in Number, which may be found under  
their proper Articles. The Exertion of the *External Senses*,  
that is, external Sensation, consists only in a Change made in  
the Superficies of a Nerve by the Contact of an external and  
sensible Object, and propagated by a free Communication of  
that Nerve to a certain Place in the medullary Substance of  
the Brain, or what the Schools call the *Commune Sensorium*,  
on which Occasion there is excited in the Mind some Idea  
of the sensible Object.

SENSUS INTERNI. The *Internal Senses*, are those  
Actions of the Mind or Intellect, to which it is excited from  
its Perception of Ideas, and are generally reduced under four  
Heads, *Memory, Imagination, the Passions, and Attention* ;  
some add *Hunger and Thirst*. A more particular Account of  
these, more than what may be found under *Imaginatio*, and  
occasionally under other Articles, we think unnecessary.

SENTIS. A Name for the RUBUS. *Blancard.*

SEPARATIO, διαχωρισμός, διαχωρήσις. The same as SECRE-  
TIO, or SEGREGATIO. See SECRETIO.

SEPARATORIUM. A Separatory. A chymical Ves-  
sel contrived for separating Liquors. It is of an oblong, and,  
in some measure, uniform Figure, with an Orifice as big as  
one's little Finger for pouring in Liquors, and a small Hole  
in the Bottom, about the Bigness of a Needle for discharging  
them ; in the Middle it is bellied for the greater Capacity. It  
is also called HYPOCLERETICUM. *Separatorium* is also a Sur-  
geon's Instrument for separating the Pericranium. *Rulandus.  
Castellus.*

SEPEIDON, σπειδών. See PUTREDO.

SEPHIROS. A kind of hard and dry Imposthume, a  
spurious Scirrhus. *Paracelsus de Ulc. & Apst.*

# S E R

SEPIA. Offic. Schrod. 5. 332. Ind. Med. 109. Salv.  
de Aquat. 165. Mont. Exot. 6. Aldrov. Exang. 44. Charlt.  
Exer. 51. Jonf. Exang. 7. Bellon. de Aquat. 336. Rondel.  
1. 498. Gefn. Aquat. 851. *Loligo, Sepia*. Mer. Pin. 191.  
THE CUTTLE-FISH.

This Fish is a kind of Polypus ; it has a Bag in its Neck,  
containing a black Liquor, like Ink, which it emits to trouble  
the Water, when pursued by other Fishes. The Bone re-  
commended in Physick as a good Diuretic, is found about its  
Middle. Others make a Powder of it for cleaning the Teeth.  
*Geoffroy.*

The Parts in Use are the Bone, or Shell, the black Liquor  
or Humor, and the Eggs. The first is a testaceous Sub-  
stance ; white and smooth, and tumid on each side ; on the  
upper Part it is somewhat hard, smooth and glabrous ; on the  
lower, fungous, softish, somewhat rough and friable. It  
grows on the Back of the Fish, and tastes a little acrimo-  
nious.

This Substance dries and absterges ; cures Spots, Freckles,  
and the humid Itch ; is good for the Eyes ; removes Swell-  
ings in the Gums ; gives Relief in the Asthma ; stops a Go-  
norrhœa ; expels the Stone, and provokes Urine. The  
black Humor found in the Bladder within the Body, is said to  
loosen the Belly ; and the Eggs absterge the Kidneys and U-  
reters, and provoke Urine and the Menfes. *Dale* from  
*Schroder.*

SEPIUM. The Bone or Shell of the *Sepium* before de-  
scribed.

SEPLASIARIUS. Properly a Seller of Perfumes, sweet  
Balls, and Ointments ; from *Seplasia*, the Market-place of *Ca-  
pua*, famous for those Commodities ; but it is, also, frequently  
used to signify one who deals in the *Materia Medica* ; the  
same as MATERIALISTA, a Druggist or Apothecary.

SEPS. Offic. Jonf. de Serp. 14. Charlt. Exer. 32. Gefn.  
de Serp. 118. Aldrov. Hist. Serp. 186. *Seps five Lacerta  
Chalcidica Columa*. Raii Synop. A. 272. Aldrov. de Quad.  
Ovip. 638. THE SERPENT SEPS.

This is a very poisonous Serpent, about three Foot long,  
and proportionably thick, said to be found in *Syria, Croatia*,  
and many other Countries. *Dioscorides* informs us, that ta-  
ken in Wine, it cures its own Bite. The Poison of its Bite  
acts like that of the Viper, and is cured by the same  
means.

SEPTA, according to *Blancard*, are Septic Medicines.

SEPTANA. A septinary Fever ; that is, one which  
performs its Period in seven Days.

SEPTENTRIO. The North. *Aqua fortis* is, also, called  
by this Name. *Rulandus.*

SEPTICA, Putrefactive, or corrosive Medicines.

SEPTINERVIA. A Name for the *Plantago* ; *lutifolia* ;  
*smuata*.

SEPTUM CORDIS. The Partition betwixt the two  
Ventricles of the Heart.

SEPTUM LUCIDUM. The thin Partition which di-  
vides the two lateral Ventricles of the Brain. See CEREB-  
RUM.

SEPTUM NARIUM. The Partition betwixt the No-  
strils.

SEPTUM TRANSVERSUM. The Diaphragm.

SEQUESTRATIO, in Chymistry, is Separation.

SERANGODES, σπηγγώδης. Cavernous ; having many  
Pores or Interstices ; spongy.

SERAPIAS. Salep. See ORCHIS.

SERAPINUS. Gum Arabic. *Rulandus.*

SERAPIUM. A Syrup.

SERBET. The same as SCHERBET.

SEREX. *Rulandus* explains this *Lac Acetosum*.

SERGEVICUM, σεργετικόν. An Epithet in *Galen*, for the  
*Unguentum Irimum*.

SERJANIA.

This Name was given to this Genus of Plants by Father  
*Plumier*, who discovered them in *America*, in Honour to the  
Reverend Father *Philip Sergeant*, who was of the Order of  
the *Minims*, and a Person well versed in the Knowledge of  
Botany and Physick.

The Characters are ;

It hath a rose-shaped Flower, consisting of four or more  
Leaves, which are placed in a circular Order ; from whose  
Flower-cup arises the Pointal, which afterwards becomes a  
Fruit composed of three Cells, having three Wings, and each  
Cell containing one round Seed.

The Species are ;

*Serjania Scandens* ; *Polyphylla et racemosa*. *Plum. Nov.  
Gen.*

*Serjania Scandens* ; *Enneaphylla et racemosa*. *Plum. Nov.  
Gen.*



*Serjania Scandens*; *Triphylla et racemosa*. *Plum. Nov. Gen.*

These Plants were found by the late Dr. *William Houfoun*, at *La Vera Cruz* and *Campechy*; where they grow to a great Height, whenever they grow near large Trees to support them; for they have Tendrils by which they fasten themselves to whatever Trees grow near them. *Miller's Diet.*

SERICIACUM. Arsenic. *Rulandus*.

SERICUM. Silk. See BOMBYX. The red Jeube is, also, called *Sericum*. See ZIZIPHUS.

SERINUS. The Canary Bird; more remarkable for its Song, than any medicinal Virtues; though it is said to be good for the Epilepsy, if eaten.

SERIOLA. A Name for the *Cichoreum*; *latifolium*; *five Endivia vulgaris*.

SERIPHUUM. A Name for the *Sifymbrium*; *annuum*; *folio Absinthii minoris*. A Species of Wormwood is distinguished by this Epithet.

SERIS. A Name for the *Cichoreum Sativum*. *Serides*, *serides*, are esculent Pot-Herbs.

SEROSUS. Serous, aqueous, abounding with Serum.

SERPENS. See ANGUIS.

SERPENS INDICUS. See COBRA DE CAPELLO.

SERPENS MARINUS. *Offic. Aldrov. de Pisc. 346. Gefn. de Aquat. 864. Rondel. de Pisc. 409. Bellon. de Aquat. 157. Sale de Aquat. 58. Jonf. de Pisc. 9. Charlt. de Pisc. 6. Raii Ichth. 107. Ejusd. Synop. Pisc. 36. Serpens marinus quindecim Pedes longus, Johnf. Iter. Cant. 410. 1632. p. 17. THE SEA SERPENT.*

It is found in the *Mediterranean Sea*. The Flesh is said to cure Incontinence of Urine, if taken with Lily Root. *Dale*.

SERPENTARIA NIGRA. See ASARUM VIRGINIANUM.

SERPENTARIA VIRGINIANA. *Offic. Serpentaria Virginiana, Contrayerva Virginiana, Viperina. Mont. Exot. Med. 7. Tres Radices sub hoc nomine in Officinis nostris veniunt, ut nos monuit eruditissimus ille Botanicus, Leonard. Plukenetius. Ad. D. in Literis ad me datis, viz. (I.) Aristolochia polyrrhizos, auriculatis foliis Virginiana, Pluk. Phytog. Tab. 78. Almag. 50. Tourn. Inst. 162. Raii Hist. 3. 393. (II.) Aristolochia Viola fruticosae foliis Virginiana, cujus Radix Serpentaria dicitur, Pluk. Phytog. T. 15. Almag. 50. Raii Hist. 3. 394. (III.) Aristolochia, Pistolochia, seu Serpentaria Virginiana, caulescens, D. Banister. Cat. MS. Raii Hist. 3. 394. Tourn. Inst. 162. Aristolochia polyrrhizos Virginiana, fructu parvo pentangulari, Hist. Oxon. 3. 310. Pistolochia Virginiana, Ger. Emac. 848. (ubi confundit cum Pistolochia Cretica Clusii) Aristolochia polyrrhizos Virginiana, Park. Theat. 420. Radix Snagrelnothae Creticus (SNAKE ROOT *Novae Angliae*) Corn. 214. VIRGINIAN SNAKEWEED.*

We have two or three Sorts of Roots, which are sold under this Name in the Shops; the first is the *Pistolochia, Virginiana* *Ger. Emac.* and the *Pistolochia Polyrrhizos, Virginiana, Park.* The second is figured by *Plukenet*, in his *Phytographia*, Tab. 15. And a third, whose Description was sent by Mr. *Banister* from *Virginia* to Mr. *Ray*, and is in the *Philosophical Transactions*, N°. 247. for December 1698; being to this Purpose.

The *Pistolochia*, or *Serpentaria Virginiana*, hath a bushy Root, consisting of a Number of small Strings of a yellowish Colour, and a hot aromatic Scent and Taste; thence grow one or two smooth or very little hairy Stalks, round and not square, upright and not trailing. The Leaves grow alternately on the Sides, and that one at a Joint. They are thin, long, and pointed, coming in like a Heart at the Foot-stalk; a little hairy above, and rough, with many protuberant Veins underneath, and in handling stick a little to the Fingers. Near the Ground grow one or two hollow Flowers, each upon its own Foot-stalk, terminating in a Heel, which supports a broad, round, gallericulated Lip, the Center of which opens into the Hollow of the Flower. The Lip is of a light rustlet Colour. The Seed-Vessel is hexagonal, shap'd like a Pear, about half an Inch Diameter, when ripe. It grows in May, and the Seed is ripe in August. The Leaves and Stalks die in Winter.

Snake-Root is a Cordial, alexipharmic, and sudorific; good in all kinds of Fevers, particularly malignant and contagious Ones, and the Plague itself. It is carminative, expelling Wind, strengthening the Stomach, and helping the Colic. It cures the Bite of a mad Dog, and other venomous Bites, particularly that of the Rattle-Snake. *Miller's Bot. Off.*

It is given as a Diaphoretic in the Small-Pox, Measles, and to kill Worms. It is, also, Emmenagogue and Diuretic. The Dose is from ten Grains to a Dram. *Groffroy*.

There is another Species of Snake Root, called the *Senekka Rattle-Snake-Root*, which is said to cure effectually the Bite of a Rattle-Snake, if taken immediately after it. The

Bite of this Snake is sudden Death, for the most Part; that is, Death follows often in fifteen Minutes, sometimes sooner; and at other times the Patient may live some Days. The Reasons of these Differences, in the Time of Death, are various, such as the Season of the Year, Constitution of the Patient, and Part bit. Those that travel or hunt in the Woods, carry this Root powdered in their Shot-Bags, to chew and swallow as soon as they are bit by the Snake, the Stagnation of the Blood being prevented by its peculiar Activity.

A Nation of Northern Indians, called the *Senekkas*, were the Discoverers of the Efficacy of the Root of this Plant; they observing that the Root and Flowers resembled the Rattle of the Snake, concluded that Providence had impressed that Characteristic to point out its Use. From that Indian Nation this Root is named *Senekka Rattle-Snake-Root*, to distinguish it from the other Plants called Rattle-Snake-Root, which are much inferior in Efficacy. These Indians returning from a War with a southern Nation called *Catarwbaes*, in the Year 1712, communicated the Efficacy of this Root to *William Caniko*, a Planter in the Frontiers of *Virginia*, which he imparted to the Country about him, and so it was soon known throughout *America*.

The Root of this *Senekka Rattle-Snake-Root*, has since been used, as is said, with Success, in the epidemical Fevers of *Virginia*; in Pleurifies, Peripneumonies, Gout, and Rheumatisms, either in Decoction, Infusion, or Substance; and in these it should seem to be a good Medicine, if the Accounts we have of it could be depended on.

SERPENTARIUM Lignum. See COLUBRINUM LIGNUM.

SERPENTINA, a Species of STELLARIA. *Blancard*.

SERPHEA. The Name of a Medicine in *Paracelsus*, *Lib. 2. de Tart.* that will liquify the Stone.

SERPIGO. The same as HERPES or IMPETIGO, for both which Affections this Word is sometimes used.

SERPILLUM.

The Characters are;

The Leaves are broader than those of Thyme. The Stalks are procumbent, less woody and hard. Its other Characters very much resemble those of Thyme.

*Boerhaave* mentions six Sorts of *Serpillum*, which are;

1. *Serpillum*; vulgare; majus. *C. B. P. 220. Raii Synop. 3. 231. Boerb. Ind. A. 133. Tourn. Inst. 197. Serpyllum verum, Offic. Serpyllum majus, Park. Theat. 8. Raii Hist. 1. 522. Serpyllum majus flore purpureo & albo, Ger. 456. Emac. 570. GREAT MOTHER OF THYME.*

It is cultivated in Gardens, and flowers in Summer. The Herb, which is the Part used, provokes Urine and the Menfes, and is good for the Gripes, Ruptures, Lacerations, and Inflammations of the Liver, eases Pains of the Head, and is particularly serviceable in Phrenesies and Lethargies; stops Vomiting of Blood, and is good for the Bites of Serpents. *Dale from Dioscorides*.

2. *Serpillum*; vulgare; minus. *C. B. P. 220. Park. Theat. 8. Tourn. Inst. 197. Boerb. Ind. A. 155. Serpyllum Offic. Serpyllum vulgare, Ger. 455. Emac. 570. Raii Hist. 1. 521. Synop. 3. 230. J. B. 3. 269. MOTHER OF THYME.*

Mother of Thyme has a small, stringy, creeping Root, from whence spring a great Number of very slender, leaning woody Stalks, having two small, roundish green Leaves, set at a Joint on short Foot-stalks. The Flowers grow on the Tops of the Stalks among the Leaves, in small loose Spikes, whorle-fashion, labiated, but with a very small Galea, of a reddish Purple Colour, set in small hairy Calyces. The Leaves and Flowers have a strong pleasant Smell; it grows frequently upon Heaths and Commons, and flowers in June and July. The whole Herb is used.

Mother of Thyme is cephalic, stomachic, and uterine; good for the Palsy, Epilepsy, and green Sickness, promoting the Catamenia. It is good against catarrhus Defluxions, and old Coughs, and helps spitting of Blood. The distilled Oil is good for the Tooth-Ach. *Miller's Bot. Off.*

Mother of Thyme is a little bitter, acrid, stiptic, odoriferous, and stains the blue Paper with a pretty deep red. It is likely that it abounds with an aromatic and oily volatile Salt; but this Salt retains still a Part of the Acid of the Sal Ammoniac of the Earth; whereas, in the aromatic, oily, artificial, volatile Salt, the acid Part of the Sal Ammoniac has been slopt by the Salt of Tartar, or by the Ashes. Thus the Mother of Thyme is cephalic, stomachic, and good for the Vapours. It destroys the explosive Matter which causes convulsive Motions; it restores the spirituous Parts of the Blood, and re-establishes the Functions of the Primæ Viæ. Infele all Night a Handful of Mother of Thyme in red Wine, strain the Infusion through a Cloth, and give it to drink last- ing to those that have the Green Sickness, for seven or eight Days.



Days together, adding to each Dose four or five Drops of essential Oil of Sassafras: The Spirit of the Mother of Thyme, and its distilled Water, are very good for soporific Disorders, and the Vapours. The essential Oil is commended for the Epilepsy, or the Water drawn from its Flowers, macerated in Aqua Vitæ, and distilled afterwards, for a Rheum or an old Cough; throw two great Handfuls of Mother of Thyme into one Quart of Water; let it give but one Boil; then take the Pot off the Fire, cover it, and add two Spoonfuls of white Honey to the Infusion, or else pour a Quarter of a Pint of the same Infusion boiling, into two equal Quantities of Cows Milk, and make the Patient drink it hot at nine o' Clock at Night. A Dram of the Powder of the Mother of Thyme is diuretic. The Conserve of the Flowers and Leaves of this Plant relieves those that are troubled with the Falling-Sickness. *Martyn's Tournefort.*

3. Serpillum; vulgare; minus; folio ex albo & viridi vario.

4. Serpillum; angustifolium; hirsutum. *C. B. P.* 220.

5. Serpillum; Africanum; hirsutissimum. *Vaill.*

6. Serpillum; foliis Citriodore. *C. B. P.* 220. *Tourn. Inst.* 197. *Boerb. Ind. A.* 155. *Serpyllum citratum*, *Offic.* Ger. 458. *Emac.* 573. *Park. Theat.* 6. *Raii Hist.* 1. 522. *Synop.* 3. 231. *Serpyllum Citriodore.* *J. B.* 3. 270. **LE-MON THYME.**

It grows in hilly Places, and flowers in *August*, and agrees in Virtues with the other Species of *Serpillum*.

**SERRA**, a Saw, a surgical Instrument used in Amputations; there are two Sorts, the greater Saw, which is used in cutting off a Limb, as an Arm, or a Leg; and the lesser, which is employed in taking off a Finger or Toe.

**SERRATA**. A Name in *Blancard* for the **CHAMÆ-DRYS**.

**SERRATULA**.

The Characters are;

The Margins of the Leaves are much, and minutely serrated; the Heads are smaller than those of the greater Centaury.

*Boerhaave* mentions five Sorts of *Serratula*, which are;

1. *Serratula*. *Offic. C. B. P.* 235. *J. B.* 3. 23. *Raii Hist.* 1. 331. *Synop.* 88. *Boerb. Ind. A.* 144. *Serratula purpurea*, *Gen.* 576. *Emac.* 713. *Serratula vulgaris flore purpurea*, *Park.* 474. *Jacea nemorensis, quæ Serratula vulgo* *Tourn. Inst.* 444. **SAW-WORT.**

It grows in Woods and Meadows, and flowers in *July*. It is esteemed vulnerary, and is said to mundify Ulcers, and promote the Generation of Flesh therein; to mitigate the Pains of the Hæmorrhoides, and to cure an Intestinal Rupture. The Herb and Root are recommended in Case of Bruises in Falls from Eminences.

2. *Serratula*; flore candido, *C. B. P.* 235. *Jacea nemorensis, quæ Serratula vulgo, flore albo.* *T.* 444.

3. *Serratula*; Virginiana; foliis rigidis. *Par. Bat.* 227. *Jc. & Desfer. M. H.* 3. 133.

4. *Serratula*; Noveboracensis; altissima; foliis Doricæ molibus, subincanis. *Par. Bat. Prodr. M. H.* 3. 133.

The following Species is elegantly crowned with a hairy Crown.

5. *Serratula*; annua; semineciliari elegantissimo. *Jacea, annua, foliis laciniatis, serratis, purpurascente flore.* *T.* 444. *Cyanus, pulchro semine Centaurii majoris,* *J. B.* 3. 24. *Centaurium capitatum, ciliare, annuum, foliis laciniatis, serratis,* *M. H. Blæf.* 362. *Chandrilla, foliis laciniatis serratis, purpurascente flore.* *C. B. P.* 130. *Senecio-Carduus, Apulus.* *Col.* 1. 34. *Boerb. Ind. alt. Plant. Vol.*

**SERRATUS MAJOR.**

This is a broad, fleshy, and pretty thick Muscle, lying on the lateral Part of the Thorax, between the Ribs and the Scapula, by which it is covered. Its Figure is that of an irregular Square, its greatest Breadth being in the Back-Part, where it terminates by Digitations of unequal Lengths, in a radiated Disposition, their Extremities describing an Arch or Curve; and from these Digitations its Name is taken.

It is inserted backward in the internal Labium of all the Basis of the Scapula, from the superior to the inferior Angle. From thence running forward wholly fleshy, it increases gradually in Breadth, is inserted in all the true Ribs, and often in one or two of the false Ribs, by the same Number of Digitations.

The Insertion in the first true Rib is about five Fingers Breadth from the Cartilage; in the second, something less; in the third, about four Fingers Breadth; the fourth, three; in the fifth, two; in the sixth, one; in the seventh, one half; and in the first false Rib, two Fingers Breadth; but in all these Measures, some Latitude is to be allowed. The Breadth of each Insertion in the Ribs, is at least an Inch.

Tho' the Digitations of this Muscle give it a radiated Appearance from the Scapula to the Ribs, yet these Radi do

not at all lie in that Disposition which at first Sight we would be subject to imagine. The Muscle is made up of two Planes, the one great, the other small.

The small Plane looks like a distinct, narrow Muscle, closely adhering to the superior Edge of the great Plane. It is fixed by one Extremity under the superior Angle of the Scapula, and by the other to the first Rib, by a small Insertion, and to the second Rib, by a broad Insertion. This Plane is easily seen by turning the Scapula forward, having first separated the *Rhomboides*; but when that is turned back, the *Pectoralis minor* being first cut off, this Plane does not appear, being covered and hid by the broad one.

The broad Plane may be divided into two Portions, one superior and one inferior, adhering to each other by their Edges.

The superior Portion is thin, and takes up about three Quarters of the Basis of the Scapula, reckoning from the superior Angle. From thence it contracts, by small Degrees, and forms two Digitations, very like those of the small Plane, which they cover by their Insertions in the two first true Ribs, or in the second and third, and sometimes in all the three.

The inferior Portion is fixed in the lower Quarter of the Basis Scapulæ, from whence it expands itself by six or seven very long fleshy Digitations, which decrease in Breadth as they descend and are inserted in the Manner already said, in the six or seven Ribs which follow the two first. It must be observed, that the three first Digitations take up almost all this Quarter of the Basis Scapulæ, the three last being fixed precisely in the inferior Angle. The Extremities of the three or four lowest Digitations mix Fibres with those of the *Obliquus externus* of the Abdomen.

The Direction of the Fibres and Digitations of the *Serratus major*, will be easily comprehended, by recollecting, that the Ribs are inclined downward in different Degrees from behind forward; for which Reason the Fibres of the superior Portion of the broad Plane, cross over the Ribs at less acute Angles than those below them, so that in the natural Situation of the Scapula, the lowest of these Fibres which run up very obliquely cross over the third, fourth and fifth true Ribs.

The upper Fibres of the inferior Portion of the broad Plane, run up proportionably more obliquely, and therefore cross over more Ribs, and at more acute Angles than the others, which are less oblique; and tho' some of these run transversely, yet the Ribs being oblique, they must cross over some of them, tho' in a lesser Degree. The lowest of these Fibres or Digitations run a little downward, and consequently fall in more with the Direction of the Ribs, but not so much as may be imagined. These Digitations are very small and weak.

The *Serratus major* raises the Shoulder or Top of the Scapula, brings it forward, and hinders it from sinking. In all these, it is the principal Actor; and it is impossible to conceive how Labourers raise and support, by the Shoulder alone, the heavy Burdens with which they are loaded, without the Assistance of this Muscle.

The Thickness, Length, and particular Disposition of its Fibres, but above all, the Insertion of the greatest Portion of them, near the Angle of the Basis Scapulæ, prove sufficiently what I advance; and the general Action of the radiated Portions is to draw the inferior Angle from the Spina Dorsi, toward the lateral Parts of the Thorax.

The uppermost and strongest Portions pull this Angle upwards at the same time, and consequently raise the Acromium, which cannot be pushed forward, by reason of its Connexion with the Clavicle.

These superior Portions cross over the greatest Part of the true Ribs; and accordingly, in raising great Burdens, we find ourselves obliged to hold in our Breath, that is, to lessen Expiration as much as we can, in order to fix the Ribs, and to hinder them from sinking, that they may serve for a solid Fulcrum to this Muscle, in Proportion to the Force with which it acts.

The next Portions run according to the Length of the Ribs, and consequently do not much constrain them in their reciprocal Motions, not being in a Condition either to raise or depress them; and the most inferior and weakest Portions are only Assistants to the rest, in bringing the lower Angle of the Scapula forward, toward the lateral Part of the Thorax.

The small distinct Plane (above described) is not an Assistant to the radiated Portions or inferior Part of the great Plane. It seems designed to regulate the Motion of the superior Angle backward and downward, while the inferior is carried forward and upward by the radiated Portions; and when their Action ceases, to bring the Scapula back to its natural Place.

The superior Portion of the great Plane is an Assistant partly to the radiated Portion, and partly to the small Plane, according



according to the different Places of its Insertions in the Basis of the Scapula.

From all this we see, that the principal Use of the *Serratus major* is to raise the Shoulder, and not for Respiration. When both Planes act together, this Muscle may in some Cases bring the Shoulder directly forward, or rather hinder it from going back; as when we push any Thing with great Force directly forward, with the Hand, especially when the Arm is extended. *Winflow's Anatomy.*

**SERRATUS MINOR ANTICUS.** *Douglas* describes this Muscle in the following Manner:

It arises tendinous from the *Processus Coracoideus Scapulae*, but soon grows fleshy and broad, and is inserted tendineo-carnous into the lower Edge of the bonny Part of the third, fourth and fifth Rib.

Its Use is either to assist the *Serratus major*, or to draw the Scapula forwards.

#### SERRATUS POSTICUS SUPERIOR.

This is a flat thin Muscle, situated on the upper Part of the Back. It is fixed on one Side by a broad Aponeurosis to the lower Part of the posterior cervical Ligament, and to the spinal Apophyses of the two last Vertebrae of the Neck, and two first of the Back.

From thence it runs down a little obliquely forward, and is inserted by broad fleshy Digitations, in the posterior Part of the second, third, fourth, and sometimes the fifth, true Ribs, near their Angles; but sometimes it has no Insertion in the second Rib. It is covered by, and closely united with the Rhomboides.

The *Serratus Posticus superior*, is disposed to move upwards the three or four upper Ribs next the first: And if any Portion of this Muscle should be observed to be inserted in the first Rib, that could only serve for the Motion of the Vertebrae, with which that Rib is articulated, and not for the Motion of the Rib itself, because of the Stiffness and Immobility of its cartilaginous Portion.

#### SERRATUS POSTICUS INFERIOR.

This is a flat, thin Muscle, lying on the lower Part of the Back. It is fix'd in the last spinal Apophysis of the Back, and in the three first of the Loins by a broad Aponeurosis; from thence it runs up a little obliquely, and is fix'd by fleshy broad Digitations in the last four false Ribs: Its Insertion in the lowest Rib is near the Cartilage, and in the other three near their Angles. It is covered by the *Latissimus Dorsi*, to which it adheres very closely, and it covers the *Sacro-Lumbaris* and *Longissimus Dorsi*.

The *Serratus Posticus inferior*, is better disposed for depressing and keeping down the last three or four false Ribs than the *Serratus Posticus superior*.

The Use which has been assigned to these two Muscles, of being Vaginal, or moveable Fræna, to the *Longissimus Dorsi* and *Sacro-Lumbaris*, is without Foundation; for the Portions of these Muscles covered by the *Serrati*, have no more Need of such a Contrivance, than those which are not covered by them. *Winflow's Anatomy.*

**SERRIOLA.** A Name in *Blancard* for the *CICHO-REUM*.

**SERTOLARA.** A Name in *Boerhaave* for the *Opuntia marina*; *que Corallina latifolia*, & *Opuntia marina*.

**SERTULA, Campana.** The same as *MELILOTUS*.

**SERVITUS, δούλος, Subserviency,** is spoken of the Functions and Uses of the Parts which are subservient to others. These subservient Parts are distinguished into *Preparatory* and *Deferent*; the *Preparatory*, for Instance, with respect to the Testicles, are the *Vasa Spermatica Preparantia*: The *Deferent* are the *Penis* and *Vasa Deferentia*.

**SERUM.** Whey. The thin Part of the Blood is, also, called its *Serum*. See *ALBUMEN, LAC*, and *ALIMENTA*.

**SESAMION, σπασμιον, or, σπασμύς,** a Sort of Cake prepared of Sesamum, Honey, and Oil. *Poësius*.

**SESAMOIDEA OSSA.** The Sesamoide Bones.

The sesamoide Bones, in general, are very small, being denominated from a Seed to which they are supposed to bear a Resemblance. Several such Bones are found in the Joints both of the Toes and Fingers.

Two of them, however, are big enough to be preserv'd in Sceletons. They resemble a large, flat, oval Pearl, hollow'd on one Side.

They are about the third Part of an Inch in Length, and half as broad as long; and they are connected near each other, by a small, short Ligament, to the Basis of the first Phalanx of the great Toe, so as to slide on each Side of the middle Eminence of the double Pulley in the first metatarsal Bone, like two small Patellæ.

Though they are generally fasten'd in Sceletons, to the first Bone of the Metatarsus, they nevertheless belong only to the first Phalanx of the great Toe, as the Patella belongs not to the Os Femoris, but to the Tibia. *Winflow's Anatomy.*

#### SESAMOIDES.

The Characters are;

The Leaves are oblong and intire, and the Flower is like that of the *Refeda*. The Fruit consists of a Congeries of little Pods, Horns, or Rays, full of a Kidney-shap'd Seed.

*Boerhaave* mentions but one Sort of *Sesamoides*, which is, the *Sesamoides*; *salmanticum*; *parvum*. 1. *Clus. H.* 296. *Boerb. Ind. Alt. Plant. Vol. I.* See *CATANANCE*.

Botanists have not determin'd what the *Sesamoides* is, which is frequently order'd by *Hippocrates* to be us'd with black Hellebore. *Dioscorides* describes it in the following Manner.

The *Great Sesamoides* in *Anticyra* goes by the Name of *Hellebore*, because it is mixed with white Hellebore in Purges. It is an Herb like *Senecio*, or *Rue*, with long Leaves, a white Flower, a slender and inefficacious Root, a Seed like that of *Sesamum*, and of a bitter Taste.

A Pugil of the powder'd Seed, with a Scruple and an half of white Hellebore, taken in Hydromel, purges Bile and Phlegm by Vomit. *Dioscorides, Lib. 4. Cap. 152.*

#### SESAMUM.

The Characters are;

The Root is annual; the Calyx proceeds from the Wings of the Leaves, almost without a Pedicle, and is small, and consisting of five long, slender Segments; the Flower is monopetalous, and much resembles that of *Digitalis*. The Ovary is filiquous, tetragonal, oblong, divided into four Cells, which are full of many eatable Seeds.

*Boerhaave* mentions three Sorts of *Sesamum*, which are; 1. *Sesamum, Offic. I. B.* 2. 896. *C. B. P.* 27. *Raii Hist.* 2. 1327. *Park. Theat.* 254. *Sesamum vel Sifamum, Ger.* 1054. *Emac.* 1232. *Sesamum seu Semp. sen Alpin. Egypt. Vol. II. p.* 47. *Digitalis Orientalis Sesamum dicta, Tourn. Inst.* 164. *Sesamum congenitibus Gangya, Lusitanis Girgilium, Mareg.* 21. *Gangila sive Sesamum Africanum, Pison.* 111. *Schit-Elu, Hort. Mal.* 9. 105. *Tab.* 54. *Tala Herm. Mus. Seyl.* 58. **OILY PURGING GRAIN.**

It is heating, moderately moistening, emollient, and pargoric; and is of a viscus, pinguious, and consequently of an emplastic Quality. It dissolves a Hardness of the Nerves, being rubbed therewith, and cures the Pain of the Cholic. *Dale from Schroder.*

*Sesamum* is very much used by the *Egyptians*, both in Food and Medicine, because it is of quick Growth, as are other Fruits after the Inundation of the Nile, and very well rewards the Planter for his Pains by the Fullness of its Pods, which never fail. *Parkinson*, I know not from what Author, says, that *Sesamum* grows spontaneously in the *East-Indies*, but that it is cultivated in *Egypt*, *Syria*, *Greece*, *Crete* and *Sicily*. The *Arabians* call the expressed Oil of the Seeds *Zeid taib*, that is, *good Oil*, by way of Eminence; because it is of very frequent Use in Meats; and in *Egypt* it is sold dearer than Oil of Olives.

*Margrave* describes this Plant with a tender strait Root, furnished with numerous Filaments, reddish on the Outside, and white within, if he does not mistake the Plant.

I am of Opinion, says *Ray*, with *J. Bauhine* and *Stapel*, that this Plant is not the true *Sesamum* of the *Antients*; and, therefore, it is to be doubted, whether the Virtues ascribed to the *Sesamum* by *Dioscorides*, really belong to it; we shall, therefore, omit them, and only insert those which *Prosper Alpinus*, in his Book of *Egyptian Plants*, ascribes to the *Sesamum*.

The Decoction of this Plant is used, he says, in Fomentations for Ophthalmies, Coughs, Difficulty of Breathing, Pleurisy, Peripneumony, and hard scirrhus Tumors. It is of Service, particularly to the Women, for Infections, in Hardness of the Uterus: It is of Use, also, in scald Heads, and Sugillations. The Plant and its Seeds boiled with Honey, are of Service in Dryness of the Nerves, Combustions, and hot Inflammations. The Decoction is of Use in Clysters for the Cholic, to render the Belly soluble, and to promote the menstrual Discharges. The Women very commonly drink the Oil and its Lees, in their Baths, in order to grow fat. The Oil serves the *Egyptians* for many other Purposes, as for Pustules, Asperities, and all other cutaneous Defecations from a melancholy Humour, being either drank, frequently taken with Food, or apply'd externally to the Parts affected. Four Ounces thereof taken in the Morning, for many Days together, is an Arcanum with some for Itchings of the Skin, Difficulty of Breathing, desperate Pleurisies, Peripneumony, for provoking the Menfes, and as a Demulcent both



both inwardly and outwardly, for violent Pains of the Stomach, Intestines and Uterus. *Raii Hist. Plant.* 1327.

2. Sefamum; alterum; foliis trifidis; Orientale; semine obscuro. *Plukn. Phyt.* 169. 4. *Digitalis, Orientalis, altera, semine obscuro.* T. 165.

3. Sefamum; Orientale; trifidum; flore niveo. *Hort. Compt. T.* 165. *Digitalis, Orientalis, trifida, flore niveo.* T. 165. *Boerb. Ind. Alt. Plant.*

This Plant is very serviceable, being used by Way of Fomentation, in the Pleurisy, Ophthalmia, and scirrhus Tumors; and administer'd in Clysters, is good for the Cholic. The *Indians* extol it above all Plants, because it procures, as they say, Beauty and Gracefulness to the Body; for their Women anoint themselves with Oil of Sefamum, which clears the Face of all Spots contracted by Sun-burning, or otherwise. The Fruit is very nutritive and eatable, and with an Addition of Poppy-Seeds, is made into Cakes. The Oil is the softest of all Oils, and is, therefore, proper in all hot Diseases. *Hist. Plant. ascript. Boerhaave.*

#### SESBAN.

The *Sesban* is a Shrub of the Bigness of the Myrtle, with the Leaves of the *Securidaca*, only longer and narrower, with nearly an equal Number of tender herbaceous Branches on each Side, if the Plant be pretty well grown. These Branches are of a watery green, somewhat inclining to red, and have something of a Roughness to the Touch. The Flowers are of a Saffron-Colour, very like those of the *Anagyris*, and hang in Bunches from a smaller Branch or Spray. From these Flowers are produced long Pods, nearly resembling those of Fenugreek, and containing Seeds not much unlike the Seeds of that Plant. The Pods, as *Vestlingius* observes, are divided into distinct Cells, according to the Number of Seeds they contain; and the same Author observes, that the Trunk of this Shrub is armed with rare and short Spines, for which Reason the *Egyptians* plant the *Sesban* in Hedges, which serve to separate their Fields.

The Seeds are said to corroborate and dry a too humid Stomach, and to restrain all manner of Fluxes of the Belly, and to be no less serviceable in repressing an immoderate Flux of the Menfes, whether they be taken in Decoction or Powder. *Prosper Alpinus. Vestlingus.*

*Morison*, in his *Hist. Oxon.* blames *C. Bauhine* and *Parkinson*, for describing this Plant with articulated Pods, when they did not clearly understand what an articulated Pod, properly speaking, was; for an articulated Pod, he says, is divided transversely into many Joints, distinguished by their Interstices; each Interstice, when the Pod is dried and broken, containing a single Seed.

As for our part, says *Ray*, we never yet saw this Plant; nor did *Morison* himself ever see it, as he owns; and therefore we cannot tell whether its Pods are really articulated, or only nodous or protuberant, where the Seeds are, and depressed or narrowed in the Interstices. *Raii Hist. Plant.*

SESCUNCIA, or SESQUIUNCIA. Half an Ounce.

#### SESELI.

The Characters are;

The Root is perennial, in the last biennial; and the Leaves are wider and shorter, and the Seeds longer than those of Fennel.

*Boerhaave* mentions four Sorts of *Seseli*, which are,

1. *Seseli*; perenne; folio glauco breviori. *Boerb. Ind. A.* 50. *Feniculum sylvestre*, Offic. *Feniculum sylvestre perenne*. *Ferula folio breviori*, Tourn. Inst. 311. *Meum latifolium adulterinum*, C. B. P. 148. *Meum alterum Italicum quibusdam*, J. B. 3. 15. *Raii Hist.* 1. 433. *Meum spurium*, Ger. 895. *Meum alterum Italicum*, Ger. Emac. 1152. *Meum spurium Italicum*, Park. Theat. 889. *Saxifraga montana minor Italica, foliis in breviores partes divisis*, Hist. Oxon. 3. 272. BASTARD SPIGNEL.

It grows on dry Hills, and flowers in June. The Root, which is in Use, is of a very dry and burning Quality, and offensive to the Stomach. Outwardly it is an Escharotic.

2. *Seseli*; perenne; folio glauco longiori. *Vaill. Feniculum sylvestre, clatius, Ferula folio longiori.* T. 311. *Saxifraga Matthioli, tenuifolia, & umbellifera*, J. B. 3. 2. 18.

3. *Seseli*; quæ *Ferule* facie, *Thapsia*, five *Turbith Gallorum*. J. B. 3. 2. 45. *Boerb. Ind. A.* 50. *Turbith cinerium, Pseudo-Turbith*, Offic. *Thapsia ferule facie, five Turbith Gallorum*, *Raii Hist.* 1. 420. *Thapsia feniculi facie*, C. B. P. 148. Park. Theat. 877. FRENCH TURBITH.

It is found in the Mountains of *Aquitain*, and the Root, which is the Part used, agrees in Virtues with the *Thapsia*.

4. *Seseli*; quæ *Saxifraga Pannonica*, *Clusii*, II. 196. *Saxifraga montana, minor, multifido folio, Pannonica*, M. H. 3. 273. *Daucus montanus, multifido brevique folio*, C. B. P. 150. *Boerb. Ind. Alt. Plant.*

The Name *Seseli* is ancient, but given to so many Plants, that there is no End of them. *Lobel* first called it *Meum Adulterinum*, by which Name it has been called almost by every one since; and *Morison* reckons it among the *Saxifrages*. There is nothing of it used in Medicine but the Root, which purges in a very violent manner both upwards and downwards. Outwardly it is used in Ointments in all cutaneous Diseases. *Seseli* is not so sweet scented as Fennel. *Hist. Plant. ascript. Boerb.*

SESELI is also a Name for several Sorts of *SILAUM*.

SESELI ÆTHIOPICUM. Offic. *Seseli Æthiopicum frutex*, Ger. 1233. Emac. 1241. *Raii Hist.* 1. 476. Park. Theat. 907. *Seseli Æthiopicum salicis folio*, C. B. P. 161. *Seseli Æthiopicum fruticosum, Perichlymeni folio*, J. B. 3. 197. *Bupleurum arborecens, Salicis folio*, Tourn. Inst. 310. *Boerb. Ind. A.* 71. SHRUB HARTWORT.

It is sometimes to be met with in the Gardens of the Curious, and flowers in August.

The Seed is much more acrimonious and scented than that of the *Seseli Massiliensis*; whence it is supposed to have some extraordinary Virtues.

SESELI ÆTHIOPICUM is, also, a Name for the *Laserpitium*; *foliis latioribus*; *lobatis*.

SESELI CRETICUM. A Name for the *Tordylium*; *Narbonense*; *minus*; and for the *Tordylium*; *Apulum*; *minimum*.

SESELI MARITIMUM. A Name for the *Ligusticum*; *Scoticum*; *Apii folio*.

SESELI MASSILIENSE. Offic. *Raii Hist.* 1. 414. *Seseli Massiliense alterum*, Ger. 894. Emac. 1051. Park. Theat. *Seseli Massiliense, Ferula folio*, C. B. P. 161. *Seseli Massiliense nuperorum, folio aliquatenus simili Vispagæ*, J. B. 3. 33. *Libanotis Massiliensis, Ferula folio*, Hist. Oxon. 3. 310. ITALIAN HARTWORT.

The Part used is the Seed, which is of principal Service in Diseases of the Head, the Epilepsy, Weakness of Sight, Convulsions, and the like, and in Affections of the Breast and Lungs, Coughs, Catarrhs; also, in Obstructions of the Liver, Dropsy, Crudities of the Stomach, in the Stone of the Kidneys and Bladder, and in a Stoppage of the Menfes. It is a specific Remedy against the *Cicuta*. *Dal.*, from *Schröder*.

SESELI MASSILIENSE is, also, a Name for the *Feniculum*; *tortuosum*.

SESELI MONTANUM. A Name for the *Orcaßelinum*; *Apii folio majus*.

SESELI PALUSTRE. A Name for the *Thyßelinum*; *palustre*.

SESELI PELOPONENSE. A Name for the *Cicutaria*; *latifolia*; *fætida*.

SESELI PYRENAICUM. A Name for the *Apium*; *Pyrenaicum*; *Thapsie facie*.

SESELI VULGARIS. A Name for the *Siler*; *montanum*; *majus*.

SESQUI. This Word, joined with any Number, Weight or Measure, signifies one Integer and an half.

SESQUIALTERUM. The same as *HEMIOLIUM*. *Sesquialtera*, in *Helmont*, is a sort of irregular or compound Fever.

SESQUIHEMINA. An *Hemina*, and an half.

SESQUILIBRA. A Pound and an half.

SESQUIOBOLUS. An *Obolus* and an half.

SESQUIPIUM. The same as *HEMIOLIUM*.

SESQUISEXARTIUM. A Sextary and an half.

SESQUIUNCIA. An Ounce and an half.

SESSILIS. An Epithet for that Species of Wart called *MYRMECIA*.

SETACEUM. A Seton.

Mr. *Bernard* observes, that a Seton was described by *Lanfranc* four hundred Years ago. Dr. *Freind* adds, that *Roland*, who lived earlier in the Thirteenth Century, not only mentions the Thing, but uses the very Word, and gives a Description how the Needle with the Thread should be passed.

*Camannusali*, a Physician of *Baldach*, or *Bagdet*, who, at the latest, lived before that City was taken by the *Tartars* in one thousand two hundred and fifty eight, mentions a Seton twice in the Cure of a Cataract, and what he calls the *Lunella*, an Impostume between the Cornea and the Uvea.

Dr. *Freind* thinks, that *Albucaßi* describes the Operation plainly, where he treats of cauterizing the Arm-pit, for a Dislocation of the Shoulders, when it arises from too great a Flux of Humors, and makes use of a Caustery, which has two or three Spits or Branches very small and sharp, and runs into the Skin till it comes out on the other side.

The same Method he uses in Tumors of the Spleen, and advises that the Ulcers should be kept running for a long time.



*Franciscus Pedemontanus*, who was Physician to *Robert King of Sicily*, about one thousand three hundred and ten, transcribes the Words of *Albucasis*, in speaking of a Dislocation in the same Place. The Discourse of *Rhazes* concerning Cantharides, makes it clear, that it was a familiar Practice in his Age. He describes the several Places it should be made in; as in the Neck, between the Ribs, in the Belly, &c. and for what Distempers, &c. The Translator calls it *Setorium*; and these Ulcers, he says, must be kept open *cum tentis & peliis*; which is as plain a Description of a Rowel, or a Seton, as Words can express. For Pains in the Ears, Eyes or Teeth, he particularly advises one to be made either in the Middle or Pulp of the Ear, and the Running to be continued as long as it can.

Dr. *Freind* is of Opinion, that the Hint of a Seton was first taken from the Cattle-Doctors, and quotes a Description of it from *Columella*, who wrote in *Claudius's* Time, and says this Method is still in Vogue amongst the Herdsmen. What is proposed by *Columella*, is, with regard to the Plague, or some epidemical Infection amongst Cows; and we find Issues were afterwards applied to the humane Body in the same Distemper; first by *J. Arculanus*, who flourished in the 15th Century; and after his Example, many Physicians in the succeeding Age recommended them as the most effectual Preservatives in that terrible Disease.

In the Time of *Albucasis*, and for some hundred Years after, the way of making a Seton was always by a Cautery. *Hallerus* was one of the first who made it with a Needle unheated; which makes it surprising, that *Hildanus* should so long after describe it as an Invention of his own. However, there seems to be some Ground for the Criticism of *Severinus*, that by the Word *Setorium*, used in the Translation of *Rhazes*, it is implied that it was not done by Ustion; and indeed it is plain, that *Rhazes* distinguishes the two ways of performing this Operation, either by Burning or Cutting, and sometimes by both jointly; and in the Article where he orders a Seton to be cut between the Navel and the Clavicle, for an Asthma, Phthisis, Pleurisy, &c. he adds, that a Cautery likewise may be applied in the same Place, for the same Complaints. *Freind Hist. Phys.*

When a few Horse-Hairs, a Thread, or Linnen Cord, are drawn through the Skin, particularly in the Neck, with a kind of large Needle, it is called a Seton. There are three Methods of performing this Operation. First the Surgeon takes up the Skin at the lower Part of the Neck, and an Assistant lays hold of it about an Inch higher, both keeping it tight; then the Surgeon passes a large broad crooked Needle (See Tab. 39. Fig. 12. or Tab. 43. Fig. 9.) armed with a Cord of Linnen, Silk or Cotton, or with a long narrow Piece of Linnen, or with twenty or thirty Linnen or Cotton Threads, gently twisted together, (Tab. 42. Fig. 17.) thro' the Skin, and removing the Needle, leaves the Thread behind. Then the Wound must be dressed with some digestive Ointment, and over each Orifice, by which the Thread is transmitted, apply a Plaister; and thus the Seton is completed, which derives its Name from *Setæ Equinæ*, or Horse-Hairs, that were used by the Ancients for this purpose; in the Room of which the Moderns substituted Linnen or Cotton Threads, as occasioning less Pain to the Patient. The Cord must be twice a Day, in the Morning and Evening, drawn first a little on one Side, and then on the other; and the Matter which is by these means discharged, as in an Issue, must be wiped off. Thus will it become an Ulcer with a double Orifice, daily emitting a large Quantity of purulent Matter; and this ought to be continued so long as the Disorder of the Patient requires. When the Cord becomes foul, a new one may be fastened to the End of it, and by drawing the old one out, the new one be gently introduced in its stead.

The second Method differs little from the first, except that in Place of a Needle, the Wound is made with a double-edged Knife; (See Tab. 22. Fig. I. or B.) and the Cord is introduced by a Probe. Thus the Knife making a larger Wound than the Needle, a greater Quantity of Matter may be discharged. For the more convenient Performance of this Operation, use an Instrument fitted with a Handle, like that in Tab. 44. Fig. 5. for when it has pierced the Skin to the Part B. the Cord or Thread may be drawn out at the Aperture A. and by drawing the Instrument back out of the Wound, it may be left behind.

The third Method of performing this Operation, is with a peculiar Instrument, as exhibited by *Bartisch*, *Andreas a Cruce*, *Hildanus*, *Fabritius ab Aquapendente*, and *Glandorp*; while the Skin is held tight by it, a Perforation is made with a sharp-pointed red hot Iron, and then the Cord is introduced. As this Method of Operation occasions violent Pain, and great Suppuration, it has been preferred as the most effectual, by eminent Physicians, for causing a copious Revulsion of

super-abundant, peccant Humours from the Eyes, and other principal Parts of the Head.

Some think a Seton made longitudinally in the Neck is preferable to the transverse. But though I have purposely tried this Method, I never could discover its Advantage over the other; but always found the Operation more difficult, as the Skin cannot be so easily raised transversely as longitudinally, nor the Needle or Knife be so conveniently introduced. In executing this Method, the Head is to be inclined backwards, and the Skin being taken up, must be perforated with a very crooked Needle, (See Tab. 43. Fig. 9.) But the Operation may be the more conveniently performed, by laying hold of the Skin with a Forceps, than with the Fingers, such as is made for the Polypus of the Nose, having two oblong Perforations towards the Extremities, (see Tab. 40. Fig. 10.) through which the Perforation of the Skin may be made.

*Dionis*, *Garangeot*, and others, think a Seton of little or no Benefit in the Cure of Diseases. On the other hand, many skilful Physicians have regarded it as a most excellent Remedy against obstinate Diseases, particularly of the Head, as Drownsness, Head-Achs, Epilepsies, and Disorders of the Eyes. And as a plentiful Revulsion is, by this Operation, made of the superfluous corrupted Humours, from the Head to the Neck, it is not surprising that some Physicians have reckoned one Seton a more efficacious Remedy than two Issues. A Seton has by Experience been proved beneficial in Distempers of the Head, as the Hydrocephalus, Catarrhs, intense Pains, with the Loss of Memory, Epilepsies, Drownsness, and even the Apoplexy: And, also, in Disorders of the Eyes, as in violent Inflammations, Gutta Serena, and a Cataract or incipient Suffusion. But the Pain and Trouble produced by a Seton, prevent many from experiencing the good Effects of so excellent a Remedy. *Heist. Inst. Chir.*

SETANIOS. *στανίος*. An Epithet for a Sort of Wheat, sown in the Spring, and reaped in the Summer, so as to be but about three Months in the Ground; whence it is called *Trimestre*, *Hornus*, or *Hornotinus*. *Setanios*, according to *Hesychius*, sometimes imports pure or fine.

SEVATIO. A *Steatoma*. *Castellus* from *Ingraffias*.

SEVERI COLLYRIUM. See ALBUM SEVERI COLLYRIUM.

SEULO. Lead. *Rulandus*.

SEUTLOMALACHE. The Beet, according to some; but others call the Spinage thus. *Blancard*.

SEVUM. The same as SEBUM.

SEXTANS. The sixth Part of a Pound, or two Ounces, or sixteen Drams. *Galen. de C. M. P. G. et de C. M. S. L.* It is, also, used for the sixth Part of any other standing Weight or Measure.

SEXTARIUS. *ξίς*. A Measure as well for Liquid as dry Things. See MENSURA. We shall only add here, that the Parts of the *Sextarius* were like those of the *As*, *Uncia*, *Sextans*, *Quadrans*, *Triens*, *Quincunx*, *Semis*, *Septunx*, *Bes*, *Dodrans*, *Dextans*, *Denunx*; by which Words a certain Number of *Cyathi* is meant, a *Cyathus* being one twelfth of a *Sextarius*.

SEXTULA. The sixth Part of an Ounce, or four Scruples.

SEXUNX. The Weight of six Ounces, or Half a Pound.

SFERRO CAVALLO. The Italian Name for the *Ferum Equinum*, Horshoe Vetch.

SHERARDIA.

This Name was given to this Genus of Plants by Mr. *Vaillant*, who was Professor of Botany at *Paris*, in honour to Dr. *William Sherard*, who was the most famous Botanist of the Age.

The Characters are;

It hath a labiated Flower, consisting of one Leaf, which is divided into five Parts at the Brim; the upper Lip being divided into two, and the under Lip into three Parts. The Ovary, which is at the Bottom of the Flower-Cup, afterward becomes a dry Capsule, containing two oblong Seeds. To these Notes may be added, that the Leaves grow opposite by Pairs.

*Miller* mentions thirteen Sorts of this Plant; which are;

1. *Sherardia*; repens; nodiflora. *Fail. Nov. Gen.*
2. *Sherardia*; repens; folio subrotundo; crasso; nodiflora. *Fail. Nov. Gen.*
3. *Sherardia*; incana; nodiflora. *Fail. Nov. Gen.*
4. *Sherardia*; nodiflora; *Stachadis ferrati folii*, folio. *Fail. Nov. Gen.*
5. *Sherardia*; ocymi folio lanuginoso; flore Purpureo. *Fail. Nov. Gen.*
6. *Sherardia*; teucii folio; flore Purpureo. *Fail. Nov. Gen.*



7. Sherardia; frutescens, teucris folio; flore cæruleo; Purpura scente amplissimo. *Vail. Nov. Gen.*

8. Sherardia; teucris folio; flore coccineo. *Vail. Nov. Gen.*

9. Sherardia; spicata; folio angusto; serrato; flore cæruleo. *Hoult.*

10. Sherardia; spicata; flore purpureo; feminibus majoribus, longioribus, & laxius digestis. *Hoult.*

11. Sherardia; verbenæ folio; subrotundo; crasso; floribus cæruleis; spica longissima & crassissima. *Hoult.*

12. Sherardia; foliis oblongis; serratis; flore cæruleo; spica longissima. *Hoult.*

13. Sherardia; aborescens; nodiflora; foliis rugosis & serratis; flore purpureo. *Hoult.*

The first of these Plants is a Native of *Europe*, so will thrive in the open Air in this Country.

All the other Sorts are Natives of the warm Parts of *America*, so are too tender to thrive in the open Air of *England*.

The second Sort was found by Dr. *William Houston*, growing plentifully in *Jamaica*. This Plant trails its Branches on the Ground, emits Roots from the Joints as the former Sort, so doth not produce many Flowers.

The fourth Sort was found in great Plenty, at *La Vera Cruz*, by Dr. *Houston*; as were the ninth, tenth, eleventh, twelfth and thirteenth Sorts, at *Campechy*, by the same Gentleman.

The third, fifth and sixth Sorts, grow plentifully in *Jamaica*, and several other Places in the *West Indies*, from whence I have received their Seeds.

The seventh Sort is a very specious Plant, which merits a Place in every good Collection of Plants. This produces long Spikes of large blue Flowers, which continue a long Time, and make a fine Appearance. The Seeds of this Sort were sent to *England* by Mr. *Robert Millar*, Surgeon, who gathered them near *Panama*.

The thirteenth Sort rises to be nine or ten Feet high, and hath a wooden Stem. *Miller's Dictionary.*

SIAGONAGRA. From *σιαγών*, a Jaw, and *ἄγχα*, a Prey. The Gout in the Jaws.

SIALOGOGA.

In the Class of *Evacuants* are to be reckoned *Sialagogues*, or *Salivants*, which potently excite a lymphatic and salival Flux, that discharges itself by the Mouth. And tho' there be several Things in the Kingdom of Vegetables, which, received by the Mouth as Emetics, or chewed with the Teeth, provoke the salival Humor from the Glands and Fauces, yet there is scarce any thing in Nature which puts the whole Mass of Lymph in so strong a Motion, and so forcibly acts upon the salival Glands and Ducts, as to cause a continual and copious Flow of Spittle, not only for Weeks but Months together, as some Substances with which we are supplied from the Mineral Kingdom, and especially those which belong to the Mercurial or Antimonial Tribe, prepared by the Art of Chymistry. As for Mercury, it is of that peculiar Force and Virtue, that whether used outwardly by Inunction, or taken inwardly in a small Quantity, it excites a most copious Salivation, by the Benefit whereof, if rightly managed, some very stubborn and otherwise incurable Diseases, which proceed from an impure Lymph and Serum, such as the Lues Venerea, Herpes, malignant Scabies, and malignant and spreading Ulcers, may be perfectly cured and quite extirpated. And this singular, and, in a manner, peculiar Virtue, belongs not only to Quicksilver well pounded with Sugar, and taken inwardly with Conserve, but to all artificial Preparations thereof, as Mercurius Dulcis, red Precipitate, white Precipitate with Spirit of Sal Ammoniac. Precipitate from a Solution of Mercury in Aquafortis, Turpeth Mineral, Arcanum Corallinum, Mercurius Diaphoreticus Jovialis, Solaris, Æthiops Mineral, and Cinnabar itself, as well native as antimonial, or common, prepared of Sulphur with Mercury, and the *Antiquarium* of *Riverius*. Preparations from the reguline Substance of Antimony, which deserve to be mentioned, are the Crocus Metallorum, *Monk's Powder*, Sulphur Auratum so called, and prepared either the common Way, by Precipitation with Vinegar, or a Solution of Steel, or even of Gold, or precipitated after a singular manner, as the *Panacea Glauberiana*; which, in the *Brunswick Dispensatories*, is called *Panacea Conordiana*.

These *Sialagogues*, or salivatory Remedies, before mentioned, may very well be divided into two Classes, the mild and the strong. Of the first Kind, which are, also, mercurial, are, also, Æthiops Mineral and Cinnabar, when exhibited in large and repeated Doses; in which Case they provoke a Flux of Spittle, and put the lymphatic Humors in Motion; and are beneficially administered in Diseases proceeding from Obstructions of the Glands, or Congulations of the Serum, or Extravasations of the same in the Head, by resolving and fusing the coagulated Juices. To this last, also, belong Antimonials, because the Sulphur being in a manner incorporated

with the reguline Substance which is in them; they act but gently, nor excite such Perturbations and severe Symptoms, as are the Effects of most chymical Preparations of Mercury. Among the gentler Sorts of *Sialagogues*, may also be reckoned Mercurius Dulcis, well washed and prepared, and Quicksilver itself, duly depurated, and reduced by Art into a solid Form and Powder, excepting Quicksilver externally applied; for when it is reduced with unctuous Substances into an Ointment, and rubbed on the inferior nervous Parts of the Feet, of the Hamus and Knees, and much more on the Spine of the Back, it frequently, and often suddenly, raises so strong and plentiful a Salivation, as is hardly to be restrained.

The Manner of Operation seems possible to be conceived and accounted for as follows: First, Quicksilver is to be considered as the heaviest of all Fluids, the least of whose Particles, in Solution and Division, always preserve their specific Gravity superior to that of all Fluids. Secondly, the Quicksilver itself may, by all the salival Menstrua, be resolved into infinitely small and subtile Molecules, which, by their corroding Force, together with their specific Gravity, may be enabled to penetrate into the innermost Parts of the Vessels and Pores in the human Body. That the Parts and Pores of Quicksilver may be diffused in a surprising manner, is evident to Sight; in that only one Grain of sublimate Mercury, dissolved in two Ounces of Water, will not only communicate to it a very sensible acrimonious metallic Taste, but, also, endue it with so efficacious a Virtue, that this Mercurial Water, used internally or externally, shall potently excite Excretions by Salivation, Sweat, Stool, or even Vomiting, according to the Disposition of the Subject and Humors; applied outwardly, it shall, on a sudden, dry up and repress the Itch and all cutaneous Defecations. Whenever, therefore, Mercurials either externally applied in Suffumigations, Plaisters or Ointments, or taken inwardly, are, by the bilious-alkaline Humors of our Body, dissolved, or reduced into very minute Parts, they speedily and effectually exert their Force upon the Nerves, and especially upon the nervous Fibres of the conglobate and conglomerate Glands, and even upon the very Membranes of the Lacicals and Lymphatics; and, by increasing their Systole and Contraction, accelerate the Motion of the Lymph; by which means the Obstruction in the Glands and capillary Vessels of the Humors are opened, and the Stagnation and Stoppages of the coagulated Lymph, are at length effectually opened and resolved.

By such Ways and Means, then, are the Lues Venerea, and other Diseases of a like Nature, extirpated; but it does not follow, that there is always a Necessity for Salivation in the Cure of these Distempers; for a skilful Person, who is acquainted with the Secret, knows how, by the dextrous Use and Application of well-prepared Mercurials and Antimonials, to cure these stubborn Diseases without Salivation. For, as all skilful and experienced Physicians will readily acknowledge, the Flux of the Saliva is not the Cause of the Cure of the Lues Venerea, but the Removal of the Obstructions of the Glands and capillary Vessels, and the Colliquation of the viscid Humors settled therein; the accidental Consequence of which is a copious Profusion of the salival Humor.

Under a Salivation excited by Mercury, the exterior, especially the lower Parts, particularly the Feet, are generally cold and contracted; there is a Stoppage, also, of the ordinary Evacuation by Stool and Urine; the free Circulation, then, of the Lymph and Serum, as well as the Blood, being, by this Stricture of the lower Parts, interrupted in the capillary Vessels, the serous and lymphatic Humors are diverted upon the superior Parts, and most of all upon the Glands of the Fauces, which are appointed for their ordinary Receptacle; from which they take their Course where they can first find a Vent, and run off in one continued Current by the Mouth, preventing both Sleep and Eating. I have observed in some who lay under an immoderate Salivation for three Months together, or longer, and were, at last, earned off by a Lipothymy, or suffocated by a Catarrh, a Coldness of the external Parts to such a Degree, that it was impossible by any Medicine, Baths, or Frictions, to recal the Heat into them. And that an Interruption of the free and equable Motion of the Blood and Lymph through all the Parts of the Body, will raise a Salivation, appears from that continual Spitting so incident to melancholy and hypochondriacal Persons, in which, for the same reason, that is, a Constriction of the inferior Parts, the Lymph and Saliva are thrown off in greater Measure upon the glandulous Structure of the Mouth and Fauces.

The Reason of that fetid and putrid Smell, which proceeds from the flowing Humour under Salivation, especially from Persons salivated for the venereal Infection, seems to be, that the very fine Parts of the Mercury exceeding all the other Humors in Gravity, and being intimately united with them, do, by their circumvoluntary Motion, commence a Dissolution of the

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Mixture, Crasis, and Contexture of the Blood, in the same manner as it happens in a Putrefaction, which is the Cause that there exhales a sulphureous Fœtor with something of a Volatility, so as to blacken the very Teeth.

All the Panaceas, so highly celebrated by the Chymists, and especially the solar Kind, which owe the greatest Part of their Virtues to metallic and mercurial Elements, if they are rightly prepared, and skilfully used, are not to be defrauded of their just Commendations in the Cure of stubborn and desperate Diseases, which will not yield to ordinary Means. Such Medicines are endued with the highest Activity of Parts, and, though exhibited in a small Dose, have a potent Influence upon the nervous System, and produce very considerable Effects. And I know how to prepare several Medicines of that kind, and especially Antimonials, which, with due Respect to the Dose and Regimen, and a proper Regard to the Subject, shall in a very small Quantity purge, vomit, and even raise a Salivation; but very few Physicians know how to administer them skilfully, and in a right manner. *F. Hoffman.*

**SIALISMUS.** The same as **PTYALISMUS**.

**SIALOCHOOS.** *σιαλοχους*, from *σιαλον*, Saliva, and *χίω*, to pour out. In *Hippocrates* it imports a Person in a Quinsy, who discharges a large Quantity of Saliva. *Sialochoi*, *σιαλοχοι*, is expounded, by *Erotian*, Persons whose Mouths abound with a bitter Saliva; and by *Hesychius*, such People as spit in a Person's Face whilst speaking to him; an Inconvenience often attending, when the Tongue is too large.

**SIBAR.** Quicksilver.

**SIBARE**, in *Avicenna*, is a violent Sort of *Phrenitis*; or, according to others, an erysipelatous, or gangrenous Inflammation of the Brain, and its Membranes.

**SIBEDATA.** In *Paracelsus*, is Swallow-Wort. *Rulandus*. It, also, imports a Stone, on which Colours are ground.

**SIBETINA.** In *Paracelsus*, is an Epithet for the Cholic.

**SIBILUS.** A hissing Noise; such as is heard during the Respiration of asthmatic Patients; or as sometimes is perceived in the Ears. The *Uvula*, is, also, called *Sibilus*, by *Vesalius*.

**SICCANTIA.** Drying Medicines.

**SICCHASIA.** *σικχασια*. In *Maschion's* Treatise de *Morbis Mulierum*, C. 18. is that Loathing of Food, and Uneasiness at the Stomach, which Women perceive during Pregnancy.

**SICCUS.** Dry. A dry Belly imports Costiveness: A dry Constitution is one which does not abound with Moisture: A dry Dropsy is a Tympanites; and a dry Ophthalmy, is an Inflammation of the Eye, not attended with a Discharge of Humours.

**SICELICA**, or **SICULA.** An Epithet for a Medicine recommended against the Cholic by *Galen*, de C. M. S. Loc. l. 9. C. 5.

**SICILIANE.** See **ANDROSÆNUM**.

**SICILICUM**, or **SICLIUM.** A Weight, equal to four Drams, according to *Galen*. *Rhadius*, in his Notes to *Scribonius Largus*, makes it only two Drams.

**SICUA.** A Cupping-Glass.

**SICYEDON.** *σικυεδον*. The Name of a Species of Fracture: the same as **CAULEDON**. See **FRACTURA**.

**SICYODES.** Single-seeded Cucumber.

The Characters are;

It hath an expanded Bell-shaped Flower, consisting of one Leaf, which is cut into several Segments at the Brim. Of these Flowers, some are Male, which adhere to no Embryo; and others are Female, which rest on the young Fruit, which is afterwards enlarged to the Size of an Almond-Kernel, and is flat and prickly, containing one Seed of the same Shape.

*Boerhaave* mentions but one Sort of this Plant, which is, the *Sicyoides Americana*; fructu echinato; foliis angulatis, T. 103. *Cucumis Canadensis*, monospermus, fructu echinato. Par. Rat. 133. *Colocynthis monococca*. Vulgo *Bryonia Canadensis*, *femine Angurie*, Volkham. *Boerb. Ind. Alt. Plant.*

*Boerhaave* conjectures this Plant to be poisonous.

*Ahler* takes Notice of another Species of this Vegetable, by the Name of *Sicyoides*; *Americana*; *Fructu echinato*; *foliis laciniatis*.

**SICYONE.** *σικυων*. This signifies, in *Hippocrates*, Colocynth; a Species of Gourd in the Shape of a Pear; a common Cupping-Glass; and a conical Cupping-Glass, open at the small End. *Galen*, *Exeges*, *Erotion* explains it, a Wild Fig.

**SICYONIUM OLEUM.** *Paulus Aegineta*, l. 7. C. 20. gives the Preparation of three Sorts of Oil under this Title. The first is the

**SICYONIUM SIMPLEX**, which is thus prepared: Take of the Root of the Wild Cucumber, two Ounces, and put them into an *Italian* Sextary, or Pint of Oil, and boil the same in a double Vessel.

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The second Sort of *Sicyonium Compositum*, is prepared in the following Manner:

Take of Oil, ten Sextaries; Root of Wild Cucumber scraped, one Pound; Serpyllum, Melilot, each six Ounces; of pinguious Torches of the Pine, [See **DAIS**.] Marsh-mallows, each five Ounces; of Scolopendrium, six Ounces; of Fænugreek, two Sextaries: Macerate the Fænugreek a Day in Water, then strain it, and put therein the other Ingredients, together with the Oil, and two Sextaries of Wine. Boil them all together, and then add thereto of Stags Marrow, beaten with a moderate Quantity of Oil, four Ounces, and a like Quantity of Fat of Hens. This done, strain off the Oil into proper Vessels: Some, after Boiling, expose it forty Days in the Sun.

Another Preparation of *Sicyonium Compositum*, of greater Virtues, is as follows:

Take Juice of Elaterium, three Sextaries; round and long Birthwort, Styra, Elecampane, Hyssop, Iris, Colocynthis, Penroyal, Origanum, Cyperus, Wood of Libanus, Centaury, Bay-leaves, each two Ounces; Oil, five Sextaries. Mix them together, and boil them till but little of the Liquor remains. *P. Aegineta, Lib. 7. Cap. 20.*

**SICYS.** A Cucumber.

**SIDA.** *σιδη*. The Pomegranate. *Sidia*, is the *Putamen*, or Rind of the Pomegranate. *Hippocrates*. *Bluncard* says, that *Sida* signifies the *Althæa*, Marsh-mallows, but I don't know his Authority.

**SIDA-POU.** The Name of a Tree which grows in *Malabar*. It is only remarkable for bearing no Fruit; at least till it is very old. *Raii Hist. Plant.*

**SIDERATIO.** An Apoplexy; or a Sphacelus; or a Species of *Erysipelas*, which the Country People call a Blaft.

**SIDERITIS.**

The Characters are;

The *Galea* is erect, the Beard tripartite, long, and pendulous; the Flowers grow in Whorles at the Wings of the Leaves, which are cut like a Crest, and differ from the other Leaves of the Plant.

*Boerhaave* mentions thirteen Sorts of *Sideritis*, which are;

1. *Sideritis*; Alpina; *Hyssopifolia*. C. B. P. 233.
2. *Sideritis*; vulgaris; hirsuta, erecta. C. B. 233. *Boerb. Ind. A. 171. Sideritis*, Offic. *Sideritis vulgaris*, Ger. Emac. 697. *Raii Hist. 1. 563. Sideritis*, vulgaris hirsuta, J. B. 3. 425. *Sideritis vulgaris Clusii*. Park. Theat. 585. **COMMON IRON-WORT**.

It grows common in *Germany*, *Italy*, and *France*, and flowers in *June*. The Herb is used, which is said to be good for Wounds, and Ruptures, and to be so drying as to cure a *Fluor albus*.

*Dale* takes Notice of a Species of *Sideritis*, of which this is esteemed only a Variety, tho' he makes them different. It is thus distinguished.

**SIDERITIS**, Offic. *Sideritis hirsuta procumbens*, C. B. P. 233. *Raii Hist. 1. 564. Tourn. Inst. 191. Sideritis Clusii Hispanica*, hirsuta, J. B. 3. 426. *Sideritis prima herba Judaica*, Park. Theat. 584. *Sideritis herba Judaica*, Ger. 559. *Sideritis Judaica Lobelii*, Ger. Emac. 690. **IRON-WORT**.

An Application of the Leaves cures Wounds, without any Danger of Inflammation.

Botanists have not determined what the three Species of *Sideritis* mentioned by *Dioscorides* are. *Dale* thinks this Plant the first; the *Pimpinella Sanguisorba*, the second; and the *Geranium Robertianum*, the third.

3. *Sideritis*; hirsuta; vulgaris; humilior. C. B. P. 233.
4. *Sideritis*; arvensis; latifolia; glabra. C. B. P. 233. *Raii Hist. 1. 566. Park. Theat. 587. Ger. Emac. 699. Boerb. Ind. A. 171. Sideritis glabra arvensis*, J. B. 3. 427. *Betonica arvensis annua flore ex albo flavescente*. Tourn. Inst. 203. **IRON-WORT WITH SMOOTH LEAVES**.

This grows amongst Corn, and agrees in Virtues with the other. *Dillenius* thinks this the right *Sideritis* of the Shops.

5. *Sideritis*; Persica; odorata; latissimo folio, hirsuta; flore ex luteo albicante. *Ex Tourn.*
6. *Sideritis*; Hispanica; frutescens; foliis rigidis profunde dentatis. *Jussieu*.
7. *Sideritis*; frutescens; folio incano Olea.
8. *An Sideritis*; Stachados folio?
9. *Sideritis*; minima; Aegyptia; ramosa. *Lippii*.
10. *Sideritis*; Lusitanica; minor, flosculis luteis.



11. *Sideritis*; *Hispanica*; procumbens; flore albo major. *T.* 192.

12. *Sideritis*; *Hispanica*; frutescens; five lignosior. *T.* 192.

13. *Sideritis*; *Orientalis*; folio *Phlomidis*. *T. C.* 12. *Boerb. Ind. Alt. Plant.*

It has its Name *Sideritis* from *σίδηρος* (*Sideros*) Iron, so *Dioscorides* calls those Herbs which are adapted to the Cure of Wounds inflicted by Iron. It is also called *Ferruminatrix* for the same Reason, and *Herba Judaica*, because the Jews formerly used it in Medicine. These Plants are very scarce, because the Seeds are sometimes three or four Years in the Ground before they appear, whence the Time of their Shooting is very uncertain. They are never used in Medicine, except sometimes by Way of Cataplasm in Hernias. *Hist. Plant. ascript. Boerhaave.*

*Dale* mentions another Species of *Sideritis*, which is the *Sideritis foliis hirsutis profunde crenatis*, *C. B. P.* 233. *Tourn. Inst.* 191. *Sideritis Monspelulana*, *J. B.* 3. 426. *Sideritis Monspelienfis Lobellii*, *Park. Theat.* 585. GERMAN IRON-WORT.

It grows in Meadows, and flowers in June and July. It is much used in the Shops of Germany, and is said to be possessed of the same Virtues as the other Species of *Sideritis*.

*SIDERITIS*, is also a Name for the *Sanicula officinarum*; for the *Stachys major*, *Germanica*; and for several Sorts of *Marrubium*.

*SIDERITIS ARVENSIS*. A Name for the *Galeopsis*; *patula segetum*; flore purpurascens.

*SIDERITIS SPINOSA*. A Name for the *Stachys*; *spinosa*; *Cretica*.

*SIDERITIS VISCOSA*. A Name for the *Galeopsis*; *angustifolia*; *Cretica viscosa*.

*SIDEROS*. *σίδηρος*. Iron. See *MARS*.

*SIDIA*. See *SIDA*. *Rulandus* explains *Sidia*, a File.

*SIDOIDES*. *σιδοειδής*, from *σίδη*, a Pomegranate. A yellowish Colour, like that of a Pomegranate.

*SIEF*. A dry Collyrium. The Word is Arabic.

#### SIEF DE PLUMBO.

Take of Lead burnt and wash'd, Copper burnt, Antimony, Tutty wash'd, Gum Arabic, Gum Tragacanth, each one Ounce; Opium, half a Dram; Rose-water, a sufficient Quantity; make them into Troches according to Art.

#### SIEF DE THURE.

Take of Frankincense, Lapis Calaminaris, Pompholyx, each ten Drams; Cerufs, five Ounces; Gum Arabic, Opium, each six Drams; fair Water, a sufficient Quantity; make them into Troches. *Pharmac. Loudinens.*

*SIELISMUS*. *σιελισμός*. Salivation.

*SIELOCINETICA*, from *σίαλον*, *Saliva*, and *κίνησις*, to move. The same as *SIALAGOGA*.

*SIGIA*. Liquid Storax.

*SIGILLATA TERRA*. Seal'd Earth. See *TERRA*.

*SIGILLUM SOLOMONIS*. Solomon's Seal, a Name for the *Polygonatum*; *luteifolium*; *vulgare*.

*SIGILLUM HERMETICUM*. An Hermetic Seal. A Glass Vessel is said to be Hermetically seal'd, when the Glass is melted, and the Vessel by this Means closed.

*SIGMOIDES*. Sigmoidal, or in the Shape of a Sigma; three Valves of the Heart have this Epithet applied to them. See *COR*. The Corocoide Process of the Scapula is called the Sigmoidal Process. The Semicircular Cavity of the Cubit, at the Articulation of the Fore-arm, with the *Humerus*, is sometimes called the Sigmoidal Cavity: And the Cartilages of the *Affera Arteria*, have the Epithet *Sigmoidal* applied to them by some Authors.

*SILACH*, or *SILAC*. A Disorder of the Eye-lid, consisting in a preternatural Thickness thereof.

*SILAUM*.

The Characters are;

The Leaves are pretty thin and short, and much like those of Fennel, only wider. The Seeds are long, sulcated, and furnished with a Sort of foliaceous Margin.

*Boerhaave* mentions five Sorts of *Silaum*, which are;

1. *Silaum quibuscum*; flore luteolo. *J. B.* 3. 2. 171. *Boerb. Ind. A.* 51. *Saxifraga vulgaris*, *Offic. Mill. Bot.* 399. *Saxifraga Anglica facie Sefeli pratensis*, *Ger.* 890. *Emac.* 1047. *Raii Hist.* 1. 453. *Sefeli pratense nostras*, *Park. Theat.* 905. *Raii Synop.* 3. 216. *Sefeli pratense Silaus forte Plinio*, *C. B. P.* 162. *Anglica pratensis Apii folio*, *Tourn. Inst.* 313. MEADOW SAXIFRAGE.

This Saxifrage has a Root about a Finger thick, striking deep in the Ground, of a brownish Colour on the Outside, and whitish within, of a hot aromack Taste and Smell, from which spring several winged Leaves, not very large, cut into long narrow Segments. The Stalks are channell'd, arising to be two Foot or more in Height, beset with smaller Leaves, and having on their Tops Umbels of pale, yellow, small, five-leaved Flowers, and after them come short striated reddish brown Seeds: It grows common in Meadows and Pasture Grounds, and flowers in August.

The Root, Herb, and Seed are used, being all accounted excellent in provoking Urine, and of great Service in the Gravel, Stone, and other Distempers of the Kidneys, as also in expelling Wind. *Miller's Bot. Off.*

The Herb and Seed are substituted in our Shops for those of the white Saxifrage.

The Juice, Decoction, distilled Water, or Seed pulverised, are found by common Experience to be effectual in provoking Urine, in diminishing and expelling the Stone, dissolving Flatulences, and easing the Pain of the Cholic. *Raii Hist. Plant.*

2. *Silaum*; quod *Ligusticum*; *Ferulae folio*. *T.* 324.

3. *Silaum*; quod *Ligusticum*; *Creticum*; folio *Fæniculti*; caule nodoso, *T. C.* 23.

4. *Silaum*; quæ *Angelica*; *pratensis*; altera; *Aprii folio*. *T.* 313.

5. *Silaum*; quod *Ligusticum*; *Cicutæ folio*, glabrum. *T.* 323. *Sefeli montanum*, *Cicutæ folio*, glabrum. *C. B. P.* 161. *Boerb. Ind. Alt. Plant.*

*SILER*.

The Characters are;

The Leaves are lobated, and of a pretty large Size, with long, intire, blunt Segments, divided at the End into Parts: The Seeds are oblong, large and striated.

*Boerhaave* mentions three Sorts of *Siler*, which are;

1. *Siler*; foliis *Aquilegiæ*. *M. U.* 7. 8. *Ligusticum Rauwolfii foliis Aquilegiæ*, *J. B.* 3. 2. 148. *Libanotis latifolia*, *Aquilegiæ foliis*, *C. B. P.* 157. *Angelina montana*, perennis, *Aquilegio folio*. *T.* 313.

2. *Siler*; *montanum*; majus. *Boerb. Ind. A.* 52. *Sefali vulgaris* & *Siler montanum*, *Offic. Sefali sive Siler montanum vulgare*, *J. B.* 3. 168. *Siler montanum Officinarum*, *Ger.* 892. *Emac.* 1048. *Raii Hist.* 1. 439. *Siler montanum vulgo Sefelios*, *Park. Theat.* 909. *Ligusticum, quod Sefeli Officinarum*, *C. B. P.* 162. *Tourn. Inst.* 323. COMMON HARTWORT.

Hartwort has a large, thick Root, that strikes deep into the Ground, with a great many stringy Fibres at the Bottom. The Stalk arises to be as high as an ordinary Man, full of Branches, having many large winged Leaves as it were encompassing the Stalks with a thin Sheath, cut into several Segments, each of which is usually divided into five, and at the End three oval smaller Leaves, smooth and pointed at the End. It has large Umbels of small five-leaved white Flowers, each of which is succeeded by two large, long Seeds, striated on the Back, and having a leafy Border on each Side, of a brown Colour, a pretty strong Smell, and a hot, bitterish Taste. It grows upon the Alps, and the Mountains of Italy, and flowers in June. The Herb and Seed is used.

They are both heating and drying, provoke Urine and the Menfes, expel the Birth and After-birth, and are good in Disorders of the Head and Womb. The Seeds are put both into the Theriaca and Mithridate. *Miller's Bot. Off.*

3. *Siler*; *montanum*; minus. *M. U.* 7. *Ligusticum, sive Siler montanum, angustifolium*. *C. B. P.* 162. *Boerb. Ind. Alt. Plant.*

*SILESIACA TERRA*. See *TERRA SILESIACA*.

*SILEX*. *Offic. Boet.* 515. *Mer. Pin.* 213. *Worm.* 39. *Charlt. Foss.* 16. *Aldrov. Mus. Metall.* 724. *Kentm.* 44. *Lapis Silex dictus niger*, *Cup. Hort. Cath. Supp.* 2. 53. *Silex niger*, *Imp.* THE FLINT.

Flints, according to *Schroder*, may be us'd internally for inciding tartareous Mucilage, resolving the Stone, and opening Obstructions. They are, also, us'd as Dentifrices.

Flints, like all other Stones, are form'd of Salts, or acid Liquors, which penetrate and intermingle with the Earth, that is an Alkali, in such a Manner, that from this Mixture results a Coagulum, which is insensibly harden'd by the subterraneous Heat, or petrified by the Cold. And here it is to be observed, that, according to the Quantity of Earth which unites with an acid Liquor, we find produced the various Sorts of Stones; and that precious Stones and Crystals owe their Denseness and Transparency to such a Proportion as was necessary to make an exact Penetration, and close Union of the Acid with the Earth.

It is very probable, that Stones are hardest when but Earth mixes in the Solution, for then the acid Water acting upon all Parts of that Earth, dissolves it intirely, after which, the Coagulation being a long Time in forming, the Parts intermix and unite incomparably better than when there is much Earth. And it is very easy to conceive, how a large Body may be composed of very small Corpuscles; for if they had been large, they would have left great Spaces, or Pores, in their Conjunction; and great Pores are contrary to hard and compact.

When much Earth mixes with the acid Liquor, the Solution is perform'd but by Halves, and the Coagulation being



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too quick in forming, there results nothing but an opake Stone, with no considerable Degree of Hardness.

*Flints* are formed of a Combination of a good Quantity of acid or saline Water, with a small Portion of Earth; but they are opake, because the Earth of which they are composed is sulphureous, and sometimes metallic.

Crystals are compos'd of a perfect Solution of Earth, or Stone, in acid or saline Waters; this Solution must be clear, or limpid like Water, either because it is filtrated in passing through some Earth, or happens in a clean Place. When it settles, it becomes fixed, in the same Manner as when Saltpetre is crystallised in Water, the Crystals retain the Purity of the Solution, and are transparent.

Precious Stones are form'd by a Solution, at least, as perfect and clear as that which forms Crystal; but then in the Solution there is an Intermixture of metallic Particles, which gives them Variety of Colours, and a Degree of Hardness much above Crystal.

Grains of Sand are small Crystals, which appear to us but like Powder of Crystals, but discover their Figure in the Microscope.

We meet with Waters in many Countries, which falling upon Rocks, at the same Instant petrify, as it happens in the Grotto of *Arfi* in *Burgundy*. The Reason that may be given for their Petrification, is, that these Waters contain an Acid, which in passing over the Earths, dissolve some Portion of them, which might be capable of inducing a Petrification; but the great Agitation they suffer in this rapid Descent from the Mountains, hinder their Coagulation, which cannot be effected before these Waters are fallen into some proper Place where they may rest.

In other Places we meet with Waters at Rest, which petrify Woods, Plants, Fruits, and Parts of Animal, cast into it. These Waters are of the same Nature with those just mentioned, only they have more of Phlegm, for which Reason they cannot coagulate themselves, but when you immerge a solid Body in them, they so penetrate it, and unite and fix themselves to it in such a Manner, as to fill all its Pores, so that the Body seems to have chang'd its Nature, and to be turned into Stone.

### CALCINATION OF FLINTS.

This Operation teaches the Manner of opening *Flints* and Crystal in such a Manner, that they may be easily reduced to Powder.

Heat *Flints* in the Fire red-hot, and quench them in common cold Water; repeat this Heating and Quenching three or four Times, until they become friable, and may be reduced to an impalpable Powder, after they have been dry'd.

Crystal is calcin'd after the same Manner, but it is sooner render'd friable than *Flints*. A Liquor and Tincture may, also, be extracted from it, as well as from *Flints*, and of like Virtue.

### OBSERVATIONS.

*River-Flints*, which are mark'd with Veins of different Colours, are esteem'd the best, because they are supposed to yield the most Tincture.

The best Way to calcine them well, is to put them in an earthen Pot, cover it well, and then put it in a Furnace in the Middle of a great Fire; the *Flints*, when heated, will sparkle and look red; continue a violent Fire till they no longer sparkle, then uncover the Pot, and cast them, red hot as they are, into common cold Water, where let them be quenched, and remain about an Hour, after which, separate the Liquor, by slooping the Vessel, and letting it run off into an earthen Pan. If the *Flints* are not yet friable enough, they must be heated red-hot again, and thrown into the same Water.

This Water receives from the *Flints*, a Salt, or Kind of Saltpetre, which, in Conjunction with the Impressions of the Iron, communicated to it from the Pot, render it aperitive, and proper for the Gravel, and Chlorosis. The Dose is a Glass at a Time.

*Flints* and Crystal are too hard to be reduced to a Powder in the ordinary Way, and, therefore, Methods must be taken to soften them, in order to render them capable of being pounded with Ease. Cold Water renders them friable, when thrown quite red-hot into it; because, Calcination having opened their Pores, the Coolness of the Water stops them all on a sudden, by which Means the small Particles of Fire, which are thus imprisoned within, make impetuous Efforts to free themselves, and breaking their little Prisons, render the Matter porous and brittle. This Heating and Quenching are repeated three or four Times, that the Substances may be penetrated and soften'd in all their Parts. Some use Vinegar instead of Water, for extinguishing *Flints* or Crystal.

## S I L

### TINCTURE OF FLINTS.

This Operation is no other than an Exaltation of some Parts of the *Flints*, and of Salt of Tartar in Spirit of Wine.

Mix four Ounces of *Flints* calcin'd and reduc'd to an impalpable Powder, very exactly, with four-and-twenty Ounces of Potash; put this Mixture in a large Crucible, which cover, and set in a Wind Furnace; make a Fire about it by Degrees, in order to give it a gentle Heat, which, afterwards, increase to the highest Degree, and continue it in that State during five Hours, so as that the Matter be always in Fusion; thrust a Spatula into it, and when you have taken it out again, you will see whether your Matter begins to grow transparent like Glass; if it does, pour it into an Iron Mortar heated, and it will immediately congeal into a hard Mass, which must be reduced to a Powder while it is hot, one Half of which is to be put into a very dry and well-heated Matrafs; pour thereon highly rectify'd Spirit of Wine, till it rises above the Matter four Digits; stop well your Matrafs with another whose Neck enters into that which contains the Matter, lute exactly the Junctures with a wet Bladder, and place it in the Sand; make a Fire under it, strong enough to cause a Simmering in the Spirit of Wine, for two Hours, and it will assume a red Colour; unlute your Matrafs, and having separated them, pour off by Inclination the Tincture into a Bottle; pour some more Spirit of Wine on what Remains, and make a Digestion as before; separate the Liquors, which will still be a little red, and having mixed it with the other, put the whole into a Glass Cucurbit, which cover with its Head, and having adapted to it a Receiver, and exactly luted the Junctures, distill off two Thirds of the Spirit of Wine in a Vapour-Bath; take your Vessel off the Fire, and keep what remains in the Bottom of the Cucurbit in a Vial well stop'd.

This Tincture is said to be a good Medicine to remove Obstructions; it is of Use in the Scurvy, and hypochondriac Disorder: The Dose is from ten to thirty Drops in some proper Liquor.

### OBSERVATIONS.

The Lime of the *Flints* unites so closely with the Salt of Tartar, by Calcination, that you might say the whole Mixture is converted into Salt, and this is what we shall shew in the following Operation.

The Spirit of Wine you use must be perfectly alcalised, or rectify'd, otherwise you will obtain no Tincture: You must, also, take Care to put the pulverized Matter, as hot as possible, in Infusion. We distil two Thirds of the Spirit of Wine, that the Remainder may be redder and stronger.

Almost all Chymists will have it, that this red Tincture comes from the Sulphur of the *Flints* being diluted with the Spirit of Wine; but it is more probable, that this Colour proceeds from the Exaltation of the alkaline Salt in the Spirit of Wine, since a like Tincture is produced from Salt of Tartar.

### LIQUOR OF FLINTS.

This Operation is a Resolution of *Flints* into a Liquid, by means of Salt of Tartar.

Take equal Parts of calcin'd *Flints* and Potash, expose them to the cold and moist Air of a Cellar, in a flat Vessel of Glass, and they will dissolve into a Liquor, as clear as common Water, which filtrate, and keep for Use.

This Liquor is said to be diuretic. The Dose is from six to five-and-twenty Drops in some proper Liquor.

If you mix together equal Parts of this Liquor, and some corrosive, acid Spirit, they will immediately form themselves into a Kind of Stone.

### OBSERVATIONS.

The Salt of Tartar, or Potash, attenuates the *Flints* to such a Degree, as to render them dissoluble like itself, as we may observe in this Operation, in which the Humidity of the Cellar entering through the Pores of the calcin'd Matter, insensibly dissolves it; and if this Solution be evaporated, you will find at the Bottom an alkaline Salt.

If this Liquor be mixed with an acid Spirit, there immediately arises an Ebullition; because, the acid Spirits penetrate the Alkali, and afterwards there is form'd a Coagulation stronger than when you throw the acid Spirit upon the Liquor of Salt of Tartar, because their Alkali contains more Tartar, than does Salt of Tartar.

This Liquor is capable of dissolving some sulphureous Obstructions which sometimes stop up the Passages, in which Case it provokes Urine; but if it meets with some acid Humour, it forms a Coagulation, which may possibly be converted into a Stone, for which Reason I would not advise the Use of this Remedy.



From the Coagulation of these two Liquors might be explain'd, in a sensible Manner, the Formation of Stones in different Parts of our Bodies, since acid Liquors and Alkali's frequently enough meet together in those Places.

The Liquor of *Flints* is of Service in extracting the Sulphur from several Minerals: The Alchymists have given it the Name of *Alcabeſt*, that is, the *Universal Dissolvent*, a Name first used by *Paracelfus*, and compounded of two German Words, *Al Geſt*, which signify *All Spirit*, (*Tout Eſprit*.) *Van Helmont*, who borrowed that Word from *Paracelfus*, apply'd it to the pretended universal Dissolvent, of which, he says, he was the Inventor. The Name, however, seems to me to be but ill adapted to the Liquor of *Flints*, as well as to several others on which it has been bestowed, since we find nothing in them but fixed Parts, without the least thing spirituous. *Lemery, Cours de Chymie*.

SILICETUS, in *Paracelfus*, imports flinty, and is us'd by him as an Epithet for very much indurated Tartar, or Gravel, in the urinary Passages.

SILIGNIS. σιλίγνις. The finest Wheat-Flower.

SILIGO. A Name for the *Triticum*; *Hybernium*; *Aristis carens*.

SILIPIT. Copper. *Rulandus*.

SILIQUEA. A Weight in Use among the Antients, equal to three Grains and  $\frac{1}{8}$ .

SILIQUEA, in Botany, is the Carob. See CAROBA.

SILIQUEA HIRSUTA, is the COWHAGE, which see.

SILIQUEASTRUM.

The Characters are;

The Wings [of the Flower] surmount the Standard; the Keel consists of two Petals; the Pointal, or Pistil, which arises out of the Calyx, is wrapped with the Stamina, and becomes a flat, membranous Pod, full of Kidney-shap'd Seeds. The Leaves are alternate.

*Boerhaave* mentions two Sorts of *Siliqueastrum*, which are;

1. *Siliqueastrum*. *Tourn. Inst.* 647. *Boerb. Ind. A.* 2. 23. *Arbor Judæ*, Ger. 1240. *Emac.* 1428. *Park. Theat.* 1554. *Raii Hist.* 2. 1717. *Judaica Arbor*, J. B. 1. 423. *Siliquea silvestris rotundi folia*, C. B. P. 402. *Cercis prior Theophrasti quibusdam, aliis Colytea Theophrasti*, *Raii Hist.* 1717. JUDAS'S TREE.

The Pod of this Plant is esteem'd astringent.

2. *Siliqueastrum*; *Canadensis*. T. 647. *Siliquea, silvestris, rotundifolia, Canadensis*. H. R. Par. *Boer. Ind. Alt. Plant.*

SILPHIUM, σιλπίον, was a Root of great esteem in *Lybia*, about *Cyrene*, for its excellent Uses, either at the Table or in Medicine. It was originally called σίρπι among the Natives, and thence σιλπι, which at last was formed into the σιλπίον of the *Greeks*. *Salmaſius, Exercit. Plin. in Solin.* takes σίρπι to be a barbarous Word; but I conceive it was the old *Chaldee* Word for Gum, which is סרפי, *Sereph*. See *Schindler's* and *Castellus's* Heptaglot Lexicon, under the Word. From hence the *Latins* deriv'd their *Serpe*, and the Juice of this Root they called *Lac-serpitiūm*, which became, afterwards, the *Latin* Name for *Silphium*, and was corrupted into *Laſerpiūm*, which they falsely deriv'd from *Laſer*. This Juice or Gum of *Cyrene* was of so high Value, that the *Romans* deposited what they could get of it in the public Treasury, as the greatest Rarity, and which *Julius Cæſar* carried away in the Time of the Civil War, as *Pliny* says: And whatever was costly and rare, was, by the *Greeks*, called from hence βάττυ σιλπίον, the *Silphium of Battus*, that is, of *Cyrene*, of which Colony *Battus* was Founder. This *Silphium* of *Cyrene* has been long lost, even before *Pliny's* Time; so that we know nothing of it more than by Conjectures, about which there are many. Modern Philosophers, and Botanists, seem to find it in our *Aſſa Foetida*. This is the Opinion of Mr. *Evelin*, Dr. *Bentley*, and Mr. *Laurence* in his new System of Agriculture. I must take leave to dissent from these great Authorities; for first, the σιλπίον of *Cyrene* is call'd by *Theophrastus* ἰσσυμνός, sweet smelling: By *Dioscorides*, as yielding, (δραμὴν προσκευάσθη) a very sweet Savour: By the old Scholiast on *Aristophanes*, Σιλπίον εἶζα ἡδυσσμός. How well this Description of the old fragrant *Lybian Silphium* agrees with the detestable Stink of *Aſſa Foetida*, I shall submit to the Nose of every Man.

*Kempfer* indeed, in his Account of the gathering of *Aſſa Foetida*, tells us, That beyond the Territory of *Disguun*, the Plant of *Aſſa* is said to have lost almost all its offensive Smell, and grown so sweet, that Goats are fond of the Leaves, and feed themselves exceedingly fat with them; but neither will this amount to the ἰσσυμνός σιλπίον of *Cyrene*.

And to this Description *Kempfer* has added the Figure of the Plant, which I have here given from him. Tab. the last.

Now as the strongest Argument, that I think can be furnished against Dr. *Bentley*, who says that he convinced Dr. *Mead* that the *Aſſa* of the Moderns was the genuine *Silphium*, I shall give a Medal or two, upon the Reverse of which we have the Figure of the old *Silphium* of *Cyrene* preserved. See TABLE the last.

The first Medal is of *Alexander*, the Son of *Ammon* who is, therefore, horned. The Reverse is the *Silphium* of *Cyrene*, in token of the Oracle of that Country, which declared him to be Son of *Hammon*.

The Legend we see is KYPA, implying *Cyrene*, which was represented by its Symbol the *Silphium*, as a Plant proper only to that Place, and the Σ, I conjecture, stands for σίρπι, or סרפי, *Sereph*, the original Name of this Plant, as is before mentioned. The Reason why the *Chaldee* סרפי is implied under the *Greek* Characters Σ is, because this Medal was struck by the *Greeks*, in Honour of *Alexander*. As this Circumstance, therefore, on the Medal, is what was never taken Notice of by *Agostino*, *Angeloni*, *Spanheim*, or others, it may be worth our Observation, as giving a great deal of Light to the present Etymology of the Word; and shewing us, what we now call σιλπίον in Imitation of the *Greeks*, was originally known by the Name of סרפי, or *Sirpi*, and from hence we may undoubtedly derive our *Sirrup*, or *Syrup*. We may, also, observe, on the other Side of the Plant, a Star in Designation of the Sun, to the intense Heat of which, in that Climate, perhaps, they ascribed all the remarkable Virtues of the *Silphium*.

The other, I suppose is either of *Hammon*, or else of *Old Battus*, according to the Epithet that *CATULLUS* gives him.

Et Batti Veteris Sacrum Sepulchrum.

The Reverse, as the first, is the *Silphium*, with the Legend KY for *Cyrene*, without the Σ.

Now if any one will compare the *Aſſa* of *Kempfer* with this Description of the *Silphium* of *Cyrene*, he must observe that there is not the least Resemblance in the World between these two Plants, the Juice or Gum of which Dr. *Bentley* convinced Dr. *Mead* and others to be one and the same.

Let us now consider the Proof upon which Dr. *Bentley* grounds his Assertion, that good *Aſſa* is the same with *Silphium*.—*Pliny* describes it thus, *Probatio ſinceri prima, in colore modice ruſo* (*Dioscorid. υπερωδεν*) *et cum frangitur candido*. The good *Silphium* is of a reddish Colour, and white within when it is broken. Now the Doctor rests his Proof upon this, that his *Aſſa* answered in all Respects this Description of *Pliny*; and therefore concludes that good *Aſſa* is the same with the genuine *Silphium*. It might be the same, I grant; for the Description of *Pliny* relates to the *Silphium Perſicum*, or what we call *Aſſa*, but not to the *Silphium Cyrenaicum*. *Pliny* owns, that *Multis jam annis in ea terra (Cyrene) non invenitur*.—That the *Silphium* of *Cyrene* had not been found for many Years. And a little after he adds, *Diſque non aliud ad nos irvehitur Laſer, quam quod in Perſide aut Media & Armenia naſcitur, ſed multò infra Cyrenaicum*. From whence we may conclude, that the *Silphium* he describes was that of *Perſia*, or what we call *Aſſa*, which was that which was common in his Time, and not that of *Cyrene*, which he never saw. So that Dr. *Bentley's* Proof, by which he convinced Dr. *Mead* and others, is no Proof at all to the Purpose it is brought. All it proves is, that the *Aſſa* of this Day, when it is good, is of the same Marks with that which *Pliny* describes, and that this was *Perſian Silphium* is hence evident; because he says no other had been found for many Years, (*diſque*) but what grew in *Perſia*, *Media*, and *Armenia*. This ought to teach us, to be a little cautious how we give up our Assent to great Authorities, that have nothing oftentimes to support them but a Name.

This same Observation will likewise hold good with respect to *Dioscorides*; for when he described it υπερωδεν, *colore ruſo*, he meant the *Perſian Laſer*, or *Aſſa*, as we have it at this day; and which I make no doubt of, from the Figure of the Plant, which *Salmaſius* has taken out of a manuscript Copy of *Dioscorides* 1100 Years old, and which seems to resemble very much the Figure in *Kempfer*, but to be widely different from that on the Medals, as may be seen by comparing them; for which purpose I had them engraved.

The Question that immediately presents itself here, is, how do we know that the Figure on the Medals is that of the *Silphium Cyrenaicum*?

The Answer is, that this Medal agrees with what *Aristotle* the Scholiast of *Aristophanes*, and *Tzetzes*, say of the Medals of *Cyrene*, that on one side they had the King βασιλιά; for so I read it in the Scholiast of *Aristophanes*, not βασιλιά; and On



on the other the *Silphium*. But *Hesychius*, under Βάττα σίλφιον, is more express. He says, the σίλφιον was so honoured among the *Cyrenians*, ὅτι καὶ ἐν τῷ νομισματὶ ὅπου μὲν Ἀμμων, ὅπου δὲ σίλφιον ἐκχαραζέσθαι, as is to be seen on their Medals, where was engraved on one side *Ammon*, and on the Reverse the *Silphium*. How well the Medals agree with this Account of the Ancients, is too evident to need any thing more to be said in Proof, that the Plant on the Reverse of these Medals is a true Representation of the *Cyrenian Silphium*, and which is very different from either that of *Dioscorides*, or *Kempfer*. From whence we may, with great Certainty conclude against Dr. Bentley and others, that the *Asa* of the Moderns is not the same with the celebrated *Silphium* of *Cyrene*. Upon the whole, it is to be supposed, that the *Silphium* of *Cyrene* is quite lost; and that we know no more of it but its Figure, and that it was of great Value for its medicinal and culinary Uses.

The *Asa Foetida* of the Moderns is thus distinguished.

ASA FOETIDA, Offic. C. B. Pin. 499. Worm. Mus. 222. Mont. Exot. 11. Scrod. 4. 184. Park. Theat. 1569. *Asa foetida nostras Officinarum*, J. B. 3. 133. *Asa foetida*, Ind. Med. 16. *Altiib. seu Asa foetida, Javanis & Malais Hindia*, Bont. 41. *Asa foetida Disgunensis, Hinaiisch, umbellifera, Levisticum affinis, instar Paeoniae ramosis; caule pleno maximo; semine foliaceo, nudo, solitario, Brancae Ursinae vel Passinaceae simili; radice Asam foetidam fundente*, Kempf. Amoen. Exot. 535. Fig. 536. DEVIL'S DUNG.

*Silphium* grows in the Countries of *Syria*, *Armenia*, *Media*, and *Libya*. Its serulaceous Stalk is called *Maspetaum*; the Leaves are like those of Smallage, and it has a broad Seed. The Root is heating, hard of Digestion, generates Inflammations, and is hurtful to the Bladder. Made into a Cerate, it cures strumous Swellings, and Tubercles, and applied with Oil in a Cataplasm, removes Lividness contracted by Blows in the Face. Mixed with Cerate of Iris or Cyperus, it helps the Sciatica. Boiled in Vinegar in a Pomegranate Shell, and applied by way of Cataplasm, it takes off Excrescences about the Anus; the same drank resists Poisons. In Sauces and Pickles, it makes a grateful Ingredient to the Palate. They collect the Juice that distils from Incisions made in the Root and Stalk. The best is what is reddish, transparent, somewhat like Myrrh, and of a strong Smell, not porraceous, nor of a harsh Taste, but when diluted turns white.

The *Cyrenean* Juice, if you taste but a little of it, raises a Moisture over all the Body, and diffuses a most fragrant Odour, so as almost to take away the Breath of him who tastes it. The *Median* and *Syrian* Kinds are weaker in Virtue, and have a ranker Smell.

All the Liquor, before it is inspissated, is adulterated with *Sagapenum*, or Bean-meal, which may be discovered by the Taste, Smell, Sight, and by diluting it. Some give the Name of *Silphium* to the Stalk, but call the Root *Magudaris*, and the Leaves *Maspeta*. The Liquor is of most Virtue, next to that the Leaves, and least of all the Stalk. This Liquor generates Inflammations, is of an acrimonious Quality, and cures an Alopecia, being mixed with Wine, Pepper, and Vinegar, and rubbed on the Part. Made into a Litus with Honey, it clears the Sight, and dissolves a Cataract in the Beginning. For Pains of the Teeth, it is put into their Cavities; or mixed with Frankincense, and tied about them in a Linnen Rag; or, lastly, serves in a Collution, or to wash the Mouth, being mixed with a Decoction of Hyssop and Figs in Oxycras. It is good to be applied to the Wounds made by the Bite of a mad Dog; and is effectual against the Poison of all venomous Creatures, and envenomed Weapons, being either drank, or used to anoint the Part. Diluted with Oil, it makes an Ointment for the Sting of the Scorpion, and is infused into Gangrenes after Scarification. It is, also, applied to Carbuncles, either alone, or mixed with Nitre, Honey and Rue; and extirpates Corns and Calluses, after they have been first cut or pared; for which Purpose it is made into a Malagma with Cerate, or the Inside of dried Figs. Used with Vinegar, it cures a recent Lichen, and removes a Sarcoma or Polypus, being mixed with Vitriol or Verdigrise, and rubbed on the Parts affected for several Days together; but the Exuberances are to be extracted with the Forceps. It cures an inveterate Roughness of the Aspera Arteria; and diluted in Water and sipped, it immediately relieves those who are taken with a sudden Hoarseness. Made into a Litus with Honey, it represses the Swelling of the Uvula; and with Oxymel, makes a good Gargarism in the Quinsy. It procures a good Colour to those who use it in Food; and taken in a poach'd Egg, is good for a Cough, and in forbile Liquors for a Pleurisy. Exhibited with dry Figs, it is effectual against the Jaundice and Dropsy; and taken in Wine with Pepper and Frankincense, it removes a Rigor. It is given, to the Weight of an Obolus, in a Tetanos and Opisthotonos; and used in a Gargarism with Vinegar, it expels Leeches adhering to the Throat. Taken in Oxymel, it relieves under

Coagulations of Milk within, and in the Epilepsy. Taken with Pepper and Myrrh, it provokes the Menfes; and with Grape-Kernels helps the Coeliac Passion; and the same drank with a Lixivium, gives Relief under sudden Convulsions and Ruptures. For Potions it is dissolved by bitter Almonds, Rue, or hot Bread. The Juice of the Leaves has the same Virtues, but in a much inferior Degree. It is good, eaten in Oxymel, for the Aspera Arteria, [περὶ ἀσπρηρίας] and particularly for a broken Voice [ἀποκοπήσιν ἤχους]; it is eaten, also, with Lettices instead of Rocket.

There is another sort of *Magudaris*, said to grow in *Africa*, whose Root resembles the *Silphium*, tho' not so thick, but is acrid, fungous, and void of Juice, yet works the same Effects with the *Silphium*. *Dioscorides*, Lib. 3. Cap. 94.

*Asa Foetida* is a Gum Resin, brought to us in Lumps of different Colours, white, yellowish, blue or brown, which last is the worst Colour of all. It has a very strong fetid Smell, and we are obliged to *Kempfer* for a very exact History of the Tree which produces it, and of the manner of gathering it.

*Asa Foetida* is an excellent Remedy in all hysteric Disorders, whether only smelled to, or mixed with what is taken inwardly. It is, also, reckoned a good Sudorific, and strengthens the Stomach. The Dose is from twelve Grains to half a Dram, but with a View to the Stomach only, it must be given in smaller Doses. Externally, it is a good Resolvent; and in that Intention, is an Ingredient in the *Ceratum de Galbano*, and is sometimes tied to the Bits of Horses Bridles. *Geoffrey*.

#### THE HISTORY OF THE ASA FOETIDA OF DISGUUN.

The *Hingisib* is an umbelliferous Plant, a-kin to Lovage, with branched Leaves like Piony; a full and large Stalk; an edged Leafy-winged Seed, naked and single, like that of Branc-Ursin or Parsnep; and a Root yielding *Asa foetida*. Its Root lives for many Years; is large, heavy, naked, black on the Outside, which in a Clayie soil is smooth, in a Gravel rough, and, as it were, wrinkled; for the most part single like a Parsnep, but often branched into two or three at a small Distance from the Top, some of which grow perpendicularly down; others run obliquely and irregularly, just as they are bent and twined by what they met in their Way. The Top of the Root throws itself out of the Ground, and is set round and thick like the *Peucedon*, with rough Fibres standing up like Bristles of a reddish-brown Colour. It has a fat juicy Rind, that easily comes off as one pulls up the Plant, and on the concave Part of it is smooth and moist. The Substance of the Root is heavy, solid and white, like a Turnep full of a fat, very white, and very fetid Juice, with a horrid ungrateful Smell, of the Garlick-kind, which is called by the *Persians* and *Indians*, *Hing*; and by the *Europeans*, *Asa foetida*. The Leaves spring out from the Top of the Root in the latter End of Autumn, six or seven in Number, and always more or fewer in proportion to the Greatness of the Root; all Winter they flourish greatly, and wither away about the Middle of the Spring. The Leaf is branched out into several Parts, even about a Cubit long, shaped for the most part like the Piony, and of the Substance, Colour and Smoothness of Lovage. It has a Smell not so strong as that of the Root, and a rank Taste, joined with a Bitterness and aromatic Keenness. It consists of Stalk and Branches. The Stalk is a span or more long, not so thick as a Man's Finger, with Ridges winding round, like a Screw, stringy and of a grass-colour, channelled towards the Bottom, by reason of the Leaves inclosing one another, in the upper Parts round. Each Branch has upon it five, more rarely seven Wings, placed on the opposite Sides, but not directly over against one another, somewhat more than a Hand's-breadth long, running obliquely upwards; the lower one is longer than the others. Each Side of the Wing is divided into several Lobes of uncertain Number, and unequal Bigness, oblong and somewhat oval; in some Plants very narrow and long, distinct and at a good distance from one another, quite to the Ribs; and thus being few and separate from each other, every one looks like a Leaf by itself; in others they are broader, shorter, and more grown together, with oval or circular Indentures in them, according as Nature has been pleased to divert herself in forming them, which she does with such Variety, that the Difference of the Leaves shall make the Plants appear as if they were not of the same Species. The Lobes run obliquely upwards, are narrow at the Bottom, and lie along by the Sides of the Rib, of a sea-green Colour, smooth, juiceless, stiff and brittle, a little hollow on the lower Side. They have one small String running from the Rib unequally along them, very rarely accompanied with others on each Side of it. The Bigness of the Lobes is uncertain; but one may reckon



reckon them, at a Medium, about three Inches long and one broad. Before the Root dies, (which generally happens in the latter End of Summer) there rises, with a Number of Leaves round it, a single, strait, round, furrowed, smooth, herbaceous Stalk or Stem, which grows up to the Height of six or nine Foot or more; at the Bottom it is larger than the Grasp of a Man's Hand; it grows less by degrees, and is divided into a small Number of Branches, and they again subdivided into Umbrellas, like the rest of the ferulaceous Plants. It is surrounded with very small Leaves, which grow alternately about the Distance of a Hand's-breadth from one another; which, with their broad, membranous, and swelling Bases, cling about the Stalk unequally and cross-ways to each other; and when they fall off, leave Marks behind them, which make a false Appearance of its being divided into Joints. It is exceeding full of a white fungous Pith, not broken by Joints, but with a few short Fibres amongst it running irregularly lengthways. The Umbrellas are upon a Stem of a Foot, others of a Span long, or yet shorter, and shoot out into several Radii disposed circularly; each of which making a kind of smaller Umbrella, ends in a few little Radii of about two Inches long; and on these grow the Seeds, naked and upright, upon short or very small Stalks. The Seed is plain and edged, (or leafy, *foliaceum*) of a reddish-brown, oval, nor unlike the Seed of *Spondylium*, or Garden Parsnep, but somewhat larger and blacker than the latter, a little hairy and rough, marked with three Furrows, one of which runs through the Middle, and the others wind along the Edges, and all reach from End to End. It has a small Scent of Garlic, and a strong smart bitter Taste. In the Middle of the outward Shell or Husk is contained the true Seed, which is black, flat and oval, ending in a sharp Point. The Flowers I did not see; but they say they are very small ones, and of a whitish pale Colour; and I do not question but they consist of five Petals or Leaves.

The Plant of *Asa foetida* is called by *Avicenna* Andsjudaan and Haltut; which Word *Dioscorides* renders *σάρατον*, and *Matthiæus* Laserpitium. In its own Country, both the Root and the Juice it affords, are called *Hingisib*, and in *India Hung*. But in common Speech, the Word *Hingisib* is used for the Plant, and *Hung* for the Juice; and in these Senses I have used these Words in my present Description. Whence the Name *Asa* is derived or corrupted, I enquire not. The *Germans*, from its strong and offensive Smell, give it the Name of *Devil's Dung*. This Plant, by the Conjectures of Botanists, has been referred to several different Species, and by the famous Criticks, *Scaliger* and *Salmasius*, set forth by its proper Marks and Names. I shall here give a genuine History of it from my own Inspection and Observation, having for that purpose taken a tedious and fatiguing Journey from the City of *Gamroon* to the Country where it grows.

*Persia*, only, is its native Country, not *Media*, *Lybia*, *Syria*, or *Cyrene*; wherefore, all the several Distinctions that are to be found in Authors, between the Juice of this or that Country's Growth, are insignificant. I was informed by two *Chinese* Dealers in Spices, that this Plant grows in their Country near the great Wall which divides *China* from *Tartary*, and has a Juice gathered from it. But I am not satisfied of the Truth of this, because I do not find any mention made of this Plant in the *Chinese Herbal*; for the importing the Gum by the Way of the Wall may have given Occasion to such a Mistake among the Ignorant. There are, at this time, but two Tracts of Land in *Persia* which produce this Plant, the Fields and Mountains near *Heraat*, which is a Market-Town in the Province of *Chorasman*, and a Range of Mountains in the Province *Laar*, which reach from the River *Gaur*, to the City of *Congo*, along the Bay of *Persia*, at the Distance of two, or in other Places three or more Parangs from the Shore. But it is not in every Part of either of these Tracts, that the Plant yields any Plenty of Juice; but about *Heraat*, that only which grows in the wild Champaign Country; and in the Province of *Laar*, that only which is found upon the Mountains near the Town or Territory of *Disgunn*. What grows on either side of these Countries, either yields a small Quantity of Juice, and is therefore not worth the Pains of gathering; or if it will yield any, there is no body to gather it. For on this side of *Disgunn*, the Inhabitants of the Country, who are *Arabians*, Husbandmen brought over from the opposite Shore, and Strangers to every other way of Life but that of Shepherds, never attempt to gather any of it, but concern themselves only for the Supply of a low and humble Life, which they lead in poor Tents, and become supine and thoughtless of every thing beyond their own wretched Subsistence, and the Care of their little Flocks. Beyond *Disgunn* the Plant is said to have lost almost all its offensive Smell, and grown so sweet, that the Goats are fond of the Leaves, and feed themselves exceeding fat with them. In order to fatten them the Day before they graze there, they are fed once

with Mountain Salt, (the only Salt they have there) and for the first fourteen Days after they begin to feed on it, they are never suffered to drink. The Plant grows indifferently in Thickets and craggy Places, and indeed wherever the Wind scatters the Seeds; but most plentifully, and often at no more than a Foot's Distance between the several Plants, in Places flatted and sunk into a Plain, as being fitter for retaining, and (on account of the better Condition of the Soil) nourishing the Seed.

It seldom grows in a moist or rich Soil, but more frequently in a stony, rocky, dry Soil, with a small Mixture of Clay; and if the upper Part of the Land furnishes not Moisture enough, it supplies itself with it from below, by striking the deeper Root. The People of *Heraat* account that which is called *Hingisib*, and grows (they say) upon the Mountains, and in the Woods of *Disgunn*, a different Species from that which they call *Huffeh*, growing in their own Fields. The former, they tell you, affords but a small Quantity of Juice, and even that thin and weak; whereas theirs at *Heraat* yields Abundance of Ouzé, more fat, unctuous, and fetid, and therefore much the better Sort. To try the Truth of this, and to observe in what respects they differed, I carefully compared a Plant of the Growth of *Heraat* (which while I dwelt at *Gamroon* I procured from *Chorasmania*, and had lost a great Part of its Strength) with one of *Disgunn*, and I profess I found no Difference in the Shape. I then shewed the Plant of *Disgunn* to the Carriers of the *Aja* of *Heraat* (who yearly brought it to *Gamroon*) not telling them of which Growth it was, and they immediately declared it to be their own, the *Huffeh* Plant the Parent of the true and genuine *Aja*. Whence I gather, that the Difference between the Plants of *Disgunn* and *Heraat* arises only from the Difference of Soil in those two Places. That of the Fields of *Chorasmania* is perhaps a fatter Soil, and therefore furnishes the Root with a larger Quantity of Juice, than the barren Ridges of the Mountains of *Laar* can afford it; to say nothing of the Juices of the Plants of each Province, which, compared together, afford not the least Suspicion that they are of a different Species; but are exactly alike, except in Cases where a Difference is made either by Adulteration, or by the Season or Manner in which they were gathered, as will appear more fully by what follows. The People of *Disgunn* distinguish between the Male and Female Plants; those of the former Sex, they say, yield no Juice, but shoot up into a Stalk, which produces Seed, and by that means they die at the Root; the latter afford the Juice, and have no Stalk: However, this is a false Distinction, and made through want of due Attention; for there is no Root ever found but what will yield Juice, if it be cut before it runs to Seed like Fennel; for it will, if left to itself, sooner or later shoot out a Stalk; after which being deprived of its vital Moisture, it withers and dies, which is common to it, with most other Plants of the umbelliferous kind. The Root is said to live a vast while, even to vie with the Life of a Man for Duration; wherefore 'tis no Wonder if the Roots sometimes be found of a monstrous Size. If the Nature of the Soil be such, that it rises not to a Head in the former Part of its Life, (as it sometimes so happens) they affirm the Stem will grow to six Foot in Length, and to the Thickness of an ordinary Man's Wrist. In its middle Age 'tis as thick as a Man's Leg or Arm, and the Thickness got by one Year's Growth is that of one's Thumb, always answered with a proportionable Length. The Fibres around the Head are sometimes a Mark of Age, and I am inclined to think they are the Remains of the Stalks of the Leaves which have fallen off, and were too nervous and firm for the Teeth of Time to destroy.

All *Asa foetida* flows from the Root when 'tis cut, and none either flows of itself, or can by any Art be pressed out of the Stalk; that Distinction, therefore, of the famous *Wormius*, between the *Aja* of the Root, and that of the Stalk, comes to nothing. A Root under four Years Growth, yields very little Juice, and is never cut; but as it grows older and larger, it yields proportionably more Liquor.

If it be taken out of the Earth, and not cut till the next Day, yet a milky Juice will flow from it; such a Quantity of Juice it abounds with, that it becomes uncommonly heavy. If it be cut through cross-ways, its whole upper Surface will be overspread with this milky Juice, which springs up in a continued Line winding irregularly. If we observe the Root carefully, we shall not find it all of the same Substance; but in some Parts of a fibrous and harder Substance, the Fibres running lengthwise in an irregular manner; and in others of a softer, more spongy, and homogeneous One; the latter seems designed for retaining the Liquor, and digesting it in its Vessels, the former for the Circulation and Conveyance of it to nourish the Stem. And I add, also, that it contributes to the making the Root firmer and more durable, which is of itself brittle and fragile. When the Root is dried from



all its Moisture, it looses all its softer Parts, and the fibrous ones only remaining, are contracted into a stringy Pith; but the rough Bark loses little of its Dimensions. The Liquor, when it first flows from the Vessels of the Root, is very white, liquid and fat, exactly like the Cream of sweet Milk, and therefore not in the least clammy; but by being kept in the Air or Sun, it changes its Colour to a light brown, and grows firmer and glutinous. Its Scent is the Test of its Excellency; the stronger it is, the better the *Afa*. When it first comes from the Root, it is of a prodigious strong Scent, above what it is, when grown firmer by Age, and brought into *Europe*; insomuch that one Dram of *Afa* fresh from the Root, will cast a stronger Smell than a hundred Pounds of what is dried by long keeping, and is usually sold by our Druggists. When I returned from the Mountains, I carried home with me a pretty many Roots, (into a very large House with a Court in the midst of it) but they filled every Room of it with so noisome a Scent, that I was forced immediately to throw them away. When the *Casila* (a Word they use for a Drove of laden Cattle and their Drivers) arrives with *Afa*, from *Chorasnia*, this Sort of Ware is always unloaded in a Field at a good Distance from the City; but notwithstanding this, if the Wind blows from that Quarter, the whole Air of the Place is infected with its Stench. It must be carried into *India* in a Vessel by itself, not with any other Goods that are liable to be corrupted; for Experience teaches, it will infect and spoil them all, and does the same by all Liquors. The Vessel in which I crossed over into *Arabia*, had one single Sack of *Heraat Afa* hanging at her Stern, which made us prodigiously uneasy with its offensive Smell; and the Master of the Ship was apprehensive, that even in that little Way, it would do harm to the Rose-Water, *Schiras* Wine, and the Eatables on board.

*Dioscorides*, Book 3. Chap. 78. has given us a long List of the medicinal Virtues of *Afa*; and *Garcias Arom. Hist.* B. 1. C. 3. has said a great deal of its Excellency that Way. The *Persian* Physicians, by reason of the Nicety of that People, hardly ever use it. The Peasants of the Province of *Laar* became acquainted with its Efficacy in curing Colic Pains, the Dropsy, and especially the Tympany, from the Advice of the *Banjans*. A Citizen of *Disgunn* himself told me, that he was afflicted with the Tympany, and that by swallowing a Bolus or large Pill of *Afa*, every Morning for six Weeks together, he was perfectly recovered. During this Course of *Afa* the Wind discharged itself so frequently upwards and downwards, and was of so abominable a Scent, that he was forced to banish himself from all Society and Conversation. The Seed of the Plant has the same Effect, but in a less Degree, and, therefore, the *Indians* fetch it hence for physical Uses. Wounds are said to be healed to a Miracle by the Application of *Afa* fresh gathered. If this Plant be laid in any Furrows where Water drains, and from thence runs into any Gardens or Groves of Palm or Date Trees, that Water will kill all the Worms at the Root of any Plant whatsoever. The *Indians* (especially the *Banjans*) use *Afa* commonly in their Sauces.

The famous *Renodans* could hardly be brought to believe this Account of it given him by *Gazzia*; for, says he, *if this be true, surely either Afa Fatida does not stink in India, or the Indians Palates are made of Brass*. I myself have tasted Cakes that have been mixed with this Liquor, which have had a far more tolerable Relish than I expected from them. 'Tis a common Thing among *Banjans* to rub the Rims of their Cups with this Liquor, to raise an Appetite.

There is a very great Dispute between the Men of *Heraat* and *Disgunn*, whose *Afa* is to be preferred; each think to advance the Worth of their own Commodity, by depreciating that of the others. At *Heraat*, the *Afa* of the Mountains of *Disgunn* is decried, as lean, dry, and of a bassard Kind; while their own is declared to be fat, soft, and of the highest Scent. The Men of *Disgunn* reply in behalf of their *Afa*, that the Fatness of the *Heraat Afa* is not natural but forced, by their mixing it at its first Gathering with the Cream of Camels or Goats; by these Means, they think it does not harden so soon, nor will it keep so long when it is thus sophisticated; thus, say they, the Buyer is cheated into a Belief, that what is really the Fatness of the Mixture, is the genuine Richness of the *Afa*. Envy, and the Love of Gain, engendered this Quarrel; but there is no Reason thence to conclude the *Afa* of these two Places to be of a different Species; wherefore, without Regard to this or any other Distinctions made by Druggists, I shall only distinguish between the Plants themselves, and the *Afa* they produce, as they grow in Fields or Mountains; at *Heraat* or *Disgunn*; or, if you would rather use the Names of the Provinces in which they grow, of *Chorasnia* or *Laar*; the one is for the most Part fatter and softer, and brought over wrapped in Sheep's and Goats Skins; the other is drier, and comes in Bags made

of the Leaves of the wild Palm-tree. As all my Observations were made upon the latter, so I here give you an Account of the Manner of gathering it, which is the same with that of gathering the *Afa* of *Heraat*, except in a very few Circumstances.

The Harvest of *Hingifeh* or *Afa*, is gathered by some of the Inhabitants of the neighbouring Villages, but principally, by the major Part of the People of *Disgunn*, who are, in all, about three hundred, and is completed in four Seasons, or, which is the same, in going four times from the City to the Hills where the *Hingifeh* grows, which are distant about two, three or four Parasangs. I will relate the Order of the several Times, or Seasons, in which the Harvest was reaped by the People of *Disgunn*, that Year I visited these Mountains, which was 1687. The Order is indeed always the same, tho' perhaps the Day on which they begin their Harvest, or the Distances between the several Seasons of it, be not always exactly the same.

#### FIRST SEASON.

Before ever they began their Work, they made Enquiry what the foreign Demands for *Afa* were, that they might not spend their Time and Labour in vain; as soon then as they are assured of a Vent for it, they flock to the Mountains about the Middle of *April*, because that is the proper Season to prepare the Root for yielding its Moisture; of which the Paleness, Drooping, and Withering of the Leaves, is a certain Sign. If the Peasants of the neighbouring Villages determine to gather any, they repair thither in the same Month. When they arrive, they disperse themselves, and keep at a great Distance from one another, so that they who have agreed to make one common Stock of what they gather, whether they are a single Family, or a Number of Families related to each other, or the People of one particular Street thus agreed, pitch severally upon a certain Tract of the Mountain, and gather there. Here each Man cheerfully falls to Work on the Plants he finds; and first, with a Spade, takes away the Earth a little Distance around the Root, which is commonly a firm Sand or Gravel, to about the Depth of a Span, so that the Root appears naked a good Height out of the Ground. Secondly, he takes the Stalks of the Leaves cross-ways in his Hand, and twists them off from the Root, which, in that Season of the Year, is easily done; then takes off the rough Crown of Fibres from its Head, which appears underneath bald and wrinkled. Thirdly, with his Spade, or Hand, he breaks the Clods of Earth he had dug up, and covers the Root again with them to the Top; then upon the Earth he lays the Leaves he has pulled off, or any other that chances to be near him, with a Stone upon them, lest the Wind, which is here often exceeding violent, should carry them away, and he, at his Return, not know where to find the Root.

The Reason of thus covering the Root, is to defend it from the Sun's Heat; for were it exposed to it, it would, in twenty four Hours, putrefy, and yield no Profit to the Labourer. After they have thus prepared many thousand Roots for gathering, (four or five Men usually prepare two thousand) they leave the Mountains and return home, having, in about three Days time, finished the Labour of the first Season, which they call *Kussian*, that is, *to kill*, as if this were *the Season of Slaughter*; because, in this Season, the Plants are condemned hereafter to die, by being drained of their vital Juice.

#### SECOND SEASON.

After forty Days spent at home (this Year they staid longer than they usually did) the whole Number of Gatherers leave the City in the Evening, and in the Morning, the twenty fifth of *May*, arrive at the Mountains; they then divide themselves, and each Company goes to its allotted Tract of Ground, to collect the Liquor from the Roots, prepared in the Manner described above; which being here got together for the Nourishment of the Leaves, now all stagnates at the Top. The Instruments they had, were, a sharp Knife for cutting the Root, a Sort of Slice or Spattle made of Iron, broad at the End, to scrape the Juice from off the Root, and a Dish or Cup fixed upon their Side, to put the Juice into, as they scraped it off, and two Baskets hanging by a Yoke from the Shoulders, in which they carry off the whole Quantity of Juice they gather. It ought to be mentioned, that every Company divides its Portion of Land, and consequently the Roots, into two Parts, and all in the Company work in each Part every other Day; because, after the Root has afforded a good deal of Moisture, it requires Time both to yield fresh Liquor, and to thicken what it has already yielded.



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Each Man takes a Root, and removes the Bundles of Leaves and Earth which cover its Top. He then cuts off the rough Top cross-ways, and leaves the upper Surface concave, whether the Liquor flows, without any Danger of running over, till after two Days it is scraped off. Then, as in the former Season, he again covers the Root from the Injuries of the Sun's Heat, and takes Care to lay the Leaves over the Surface arch-wise, that they may not, by pressing upon it, wipe off the Juice. When their Task is finished for that Day, the next Day, the twenty sixth of May, is spent from Day-break in the like Labour, in the other Division of their Land: On the twenty seventh they revisit the first Part with which they began, and after having taken away the Shelter of Leaves, they scrape off the Liquor they find at the Top of the Root, and put it into the Dish that hangs by their Side. Then they take away a little more of the Earth about the upper Part of the Root, and with their Knife cut off the dry Surface, about the Thickness of an Oat-straw; for it is enough if just the Outward Surface be cut off, which stopp'd up the Pores, which, when that is removed, discharge themselves of their Liquor; and indeed they have experienced, that the thinner the Parings are, the freer and more plentifully the Root flows again. The same Persuasion they have of the Preferableness of one Manner of cutting it, which they require should be performed by striking the Knife through, and not the common Way of drawing it backward and forward; which, they say, does not make them ouze so plentifully as the other.

The Reapers frequently empty the Dishes which hang by their Sides, and then put the Juice into larger Vessels, or pour it into Leaves laid upon the Ground, that the Sun's Heat may stiffen it; by which means also it loses its natural Whiteness; for its Substance being soft and differently situated, admits the Sun's Rays in a greater Quantity in some Parts than in others; its Colour also may be affected by what it is laid upon when fresh gathered.

Thus, after the Root is covered again, the Work is done. On the twenty eighth, the same Business is done in the same Manner, in the second Division. On the twenty ninth they return to the first Division; and when they have gathered the Liquor from the Root a second time, they take away the Earth, cut it, and cover it again as before. On the thirtieth, the Liquor in the Roots of the second Part, is gathered a second Time, and the Roots cut. This is the Work of the second Season, in which the Roots are thrice cut, and the Liquor that pours out of them twice gathered. Then each Man puts his whole Collection into the Baskets, which hang on each Side of him, from a Yoke laid across his Shoulders; and carries it away. Each Company of four or five Men carry off about ten or twelve *Maan* of *Disguum*, that is, about fifty *German* Pounds. This *Afa* of the first Gathering, is not esteemed the best, but rather a meaner Sort.

### THIRD SEASON.

After ten Days time (eight will do) allowed for the Roots to supply themselves with fresh Liquor; on June tenth, at Day-break, they return to the first Division, and go on with their Harvest. Having removed the Shade of Leaves, and the Earth from about the Root as before, they scrape off the Liquor from the Top of it, and then cut it again, and cover up the fresh Wound as before. On the eleventh they do the same in the second Division.

This Liquor, which in ten Days time flows from the Roots in a larger Quantity, and is of a due Consistency, is called *Pispaas*, the other is called *Sjur*, that is *Milk*, from its Whiteness, and want of Consistency. The *Pispaas* is commonly esteemed much better, and is a great deal dearer than the *Sjur*, whether on account of its Scarcity, or its greater Consistency, I know not; this I am sure of, that the *Sjur*, tho' it is thinner, is not of a worse Substance than the *Pispaas*; for if it be longer exposed to the Air, it grows full as firm, and cannot be distinguished from it. I am, therefore, inclined to think, that the People of *Disguum* never before sold the *Afa Sjur* pure and genuine, but always adulterated it, which was easily done, when it was fresh gathered, because it was so liquid and thin; whereas the *Pispaas* being much more consistent and firm, will not mix with any other Substance, and is therefore sold neat and pure. All *Afa* is of itself simple and unmixed, therefore, all heterogeneous Matter in *Afa* comes by Adulteration. The Reapers themselves confessed to me, that they used to mix with the *Sjur Afa*, not Meal, nor any Sort of Sagapenous Gum, as most Writers have thought, but a pure Clay, which was just at Hand on the Mountains where they gather it. Most, they said, put an equal Quantity of this to their *Afa*; others twice as much, or in Proportion to their Desire of Profit, still putting in the more, the thinner the *Afa* was. This made the Price of this

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*Afa* very low; and after the Cheat was discovered, the *Afa* of this Sort was despised; and indeed, they who thus adulterated it, suffered enough for it; for no body would buy any *Disguum Afa* for Fear of this Imposition; having therefore learned more Prudence, they no longer use any Kind of foreign Mixture, but put the *Afa's* of each Sort and Gathering promiscuously together, and carry it in Bundles to *Congo* and *Ormus*, whence 'tis exported. And if there is yet any Mixture in it, it is through the Negligence of the Gatherers, in not covering the Roots carefully after they have cut them: Tho' indeed all their Care cannot prevent Dirt and Dust from falling from the Leaves that shade the Roots, or from being blown upon them by the Wind, which will, in some Measure, foul the Liquor.

On the twelfth Day, in the first Division, and on the thirteenth, in the second Division, they gather the Juice *Sjur*, and cut and cover the Root again; and on the fourteenth they do the same again in the first Division, and on the fifteenth again in the second; so the Roots, after having yielded once the thicker *Afa Pispaas*, and twice the thinner *Sjur*, are left under their Covers.

### FOURTH SEASON.

After three Days Stay at home, on the third of July, they visit the Roots again; having been taught, by Experience, that in a longer Intermission, after they have been so often drained of their Moisture, and brought nearer and nearer Death, they will be subject to putrefy, and whatever Liquor they have then in them, would be lost, by deferring the Gathering of it any longer. The first Day is spent in gathering the *Afa Pispaas*, in the first Division, in the Manner before described. The fourth Day is spent in the second Division, in the same Work. On the fifth Day they gather *Afa Sjur* in the first Division; and on the sixth, in the second Division. On the seventh Day they finish the Work in the first Division; they get what Juice they find there, and cut the Roots no further, but leave them uncovered, whereby the Air and Sun presently kill them. On the eighth Day, they concluded the Business in the second Division, and leave the Roots, in the same Manner, to be destroyed. Thus is the Harvest of *Hingeseb* or *Afa* completed.

In three Excursions to the Hills, they gather the *Sjur Afa* eight Times, and the *Pispaas* three times from each Root. But it is to be remembered, that the larger Roots, such as are above twenty Years old, and are found in the furthest Parts of the Mountains, whither they cannot climb without great Difficulty, are not so soon laid aside, but they will yield the *Afa Pispaas* four or five times, and the *Afa Sjur* so much oftener in Proportion. So that these Roots are not completely drained of their Juice till September. However, in these Mountains few Roots are found above ten Years old, and none ever exceed twenty. For the great Price that *Afa* hath bore for many Years together, made the Reapers gather all the Roots that ever they could find, so that there has not, of late, been Time enough allowed for any to arrive at so great an Age and Bulk. The Roots being drained of their Moisture, and left uncovered, do every one of them putrefy: Tho' one of the Reapers affirmed to me, upon his own Experience, that if they were covered with Earth, they would grow again; but in this Point none of the rest agreed with him. *Kempfer*.

SILURUS. *Ossic. Schw. Theriot. Sil. 444. Schonei. Ichth. 69. Rondel. de Pisc. 2. 180. Silurus Rondeletii, Raii Ichth. 128. Ejusd. Synop. Pisc. 70. Gesn. de Aquat. 867. Glanis, Aldrov. de Pisc. 567. Salv. 210. Charlt. de Pisc. 40. Jonst. de Pisc. 101. The SHOAR FISH.*

This Fish is found in the *Danube*, and its Flesh is nourishing when eaten fresh, and loosens the Belly; but seasoned with Salt, affords very little Nourishment, but clears the *Aspera Arteria*, and mends the Voice. The salted Flesh applied draws out Splinters, and the Pickle cures a recent Dysentery, being used by Way of Infection, by attracting the Flux of Humours in the Superficies; a Clyster of the same cures the Sciatica. *Dioscorides*.

SILYBUM. A Name for several Species of Thistles. Thus there is the *Carduus Lacteus, peregrinus, major, semine fusco*, which is called by *Parkinson*, *Silybum minus annuum*. And the *Carduus lacteus peregrinus Camerarii*. J. B. *albus maculis notatus exotius*. C. B. is called, *Silybum minus Batium*, by the same Author. See AGA CRETENSIMUM.

### SIMAROUBA.

The most celebrated Plants which have been pointed out and recommended, either by the ancient Botanists in general, or modern Travellers in particular, as specific Remedies, are not really specific, but in certain Cases. Diseases seem not to resemble one another more in some certain Symptoms, which are common to them, than they sometimes differ as to the Cause.



Causes on which these Symptoms depend. Hence it must of Necessity happen, that the same Remedies being employed in Diseases, which resemble one another only in Appearance, seldom or never produce the same Effects; and this has given Occasion to the ill Usage which is every Day made of the most salutary Plants, and that Neglect and Disregard which have afterwards been shown to those which were, at first, the most in vogue.

The Plant *Ipecacuanha*, which *Piso* had observed to be one of the most effectual Remedies for a Dysentery with the People of *Brasil*; that famous Root which the late *Helvetius* first employed with so good Success in this Country, and which, from that Time, justly passed for a Specific against that Disease, is on the Point of sharing the common Fate of all wonderful and extraordinary Plants imported from foreign Countries.

Ought we then to condemn as useless that Remedy, because it has not always succeeded in Dysenteries when prescribed? Or ought we not rather to lay the Blame on the Want of Experience in those, who being no Physicians, directed the Use of it on improper Occasions? And indeed what Remedy, tho' ever so effectual, would not be subject to lose its Reputation in such Hands?

The true Reason why *Ipecacuanha* is sunk in its Esteem among us, is, that instead of a prudent Use of it, in a Collection of Crudities in the *Primæ Viæ*, or the abdominal Viscera, it has been prescribed sometimes in hepatic Fluxes, sometimes in dysenteric Fluxes occasioned by an immoderate Use of Purgatives, frequently under an Inflammation about the Abdomen, and sometimes when a pungent and fixed Pain, which attends some Dysenteries, gives Room to suspect a cancerous Ulcer in the Intestines.

To direct the Use of *Ipecacuanha*, on any of these Occasions, would be, in a Manner, to force Nature to produce, by Means of this Remedy, Effects for which she never designed it. If the little Success which attended its Administration in all these Cases, was an evident Proof that they were all out of its Sphere, would it not be prudent and advisable for the practical Physician to abstain from the Use of it, because, in these Circumstances, it had not answered his Expectation? And since he was convinced by his Observations, that this Root cured no Dysenteries but such as were of a certain Character, should not that Experience have put him upon the Search for new Specifics, for the Cure of those which might be of another Kind?

It can hardly be doubted by those who have never so little consulted the ancient Botanists, but that such there are in Being; and if the Ancients had the Knowledge of some of them, why should we despair of retrieving them from that State of Oblivion into which they are fallen since their Time?

*Dioscorides* speaks of a Root of a yellowish Cast, pretty thick, and very astringent, which, he says, was brought from *Barbary*, a Name given in his Time to the remotest Countries of the East. The Bark of this Root was then used in Decoction for Hemorrhages at the Mouth and Nose, for Dysenteries and Fluxes [*Devoyments*]; he gives it the Names of *Μακί* (*Macer*) and *Μακίρ* (*Macir*).

*Pliny* calls by the same Names of *Macer* and *Macir*, the Bark of a Tree which was brought from the *Indies*, and which, he says, was of a reddish Colour.

*Galen*, who in the Description and Uses which he gives us of it, agrees with these two Authors, only adds, that it is aromatic.

And it is not at all strange that *Averroes*, and other *Arabian* Physicians, had the Knowledge of the *Macer*, since it is the Bark of a Tree which grows in the Eastern Countries.

All that has been said by ancient Authors concerning the *Macer*, may be found in the Relations given us by some who have travelled into the *East Indies*, and particularly those who have visited the Coasts of *Malabar*, and the Island of *Sainte Croix*. They tell us of a greyish Bark, which being dried, becomes, as they say, yellowish, is very astringent, and has the same Virtues as the *Macer* of the Ancients.

*Christopher Acosta*, who has given us one of the first Accounts of simple Drugs imported from the *Indies*, and was Physician to the Viceroy, says, that the Tree which bears that Bark, was, by the *Portuguese*, called *Arbore de las Cammaras*, and *Arbore Sancto*; that is to say, "a Tree for Dysenteries," and, for its Excellence, "The Holy Tree;" by the Christians, *Arbore de Sancto Thome*, "the Tree of St. Thomas," by the Natives of the Country, *Macruyre*, and by the Brachman Physicians *Macre*, which agrees with the ancient Word *Macer*.

The same Historian, who is the only one that has given us a Figure of that Tree, compares it with one of our Elms; and as to the Virtues and Use of its Bark, he relates such particular Matters of Fact, of which, he says, he had been an

Eye-witness, that there is hardly any Remedy which might with more Justice claim the Name of a *Specific*.

To shew the Value which they have for this Bark in the *Indies*, I shall only quote a Passage from the Works of that Physician, being an Elogy, or Commendation, given, he says, by an *Indian*, to the Tree which he called *Macre*, as he was shewing it to him. It was a Tree, he said, pointed out by Angels for the Health of Mankind, and that it was to be preferred in its small Dose before the large Quantity of Barks of *Myrobalans*, *Areca*, and *Coris*, which are usually prescribed, and have been always reputed by the *Indians* the most excellent Remedies against the Dysentery.

*Clusius*, a Botanist of the sixteenth Century, and particularly famous for his learned Inquiries into foreign Plants, had a Suspicion even in his Time, that a certain small Quantity of Bark, like that just before described, and which he saw at a Physician's at *Amsterdam*, for whose Use it was imported from the *Indies*, as a Specific against the Dysentery, was the same Bark which *Monardes*, a Physician of *Sevil*, says, in his *History of Drugs*, he had so happily made use of in that Distemper, without knowing what it was.

All these Descriptions, which seem to agree to the same Tree, and that Tradition of the Virtues of its Bark, proved true by the Experience of those Authors, have excited my Curiosity, in order to attain the Knowledge of so sovereign a Remedy, and to enquire into the Causes whence it comes to be intirely lost, since the Time of *Galen*, in the Western Parts of the World.

About the Year 1713, there was first imported from *Cayenna*, to M. le Comte de Pontchartrain, Secretary of State, the Bark of a Tree called in that Country *Simarouba*, and which he was assured was used, in those Parts, with good Success, in Fluxes and Dysenteries. This Account of its Usefulness induced that Minister to make a Present of it to the Academy of Sciences, and to M. *Fagon*, at that time first Physician to the King, who presented a Part to the Professors of the Royal Garden. But the small Quantity which was distributed to them not permitting them to make many Experiments, it only served to lie in their Druggery, as a Sample of a rare Drug, whose Effects were not as yet well attested in those Parts.

All that was then discovered relating to it, by the Experiments which M. *Fagon* caused us to make, was, that this Medicine was, at least, safe, and not dangerous, since it had no sensible Effect, neither by any manner of Evacuation, nor by the least Pain in the Intestines.

But in the Year 1718, when the Heats of the Summer were excessive, and gave Rise to vast Numbers of Dysenteric Fluxes, which were so far from yielding to Purgatives and common Astringents, or even to *Ipecacuanha* itself, which was accustomed to be used, with good Success, in repressing those extraordinary and violent Kinds of Evacuations, that, on the contrary, they were rather the more exasperated and increased by the Repetition of those Remedies, we had Recourse, as to the last and most sovereign Remedy, to the small Quantity of *Simarouba* which was left us, of the Distribution which M. *Fagon* had made to us, and we were soon satisfied, in short, that of all the Remedies which we had hitherto put in Practice, none had so readily succeeded as this Drug.

This happy Success having raised more and more my Esteem for this Bark, I intreated M. *Randot*, Intendant General of the Navy, to procure for me another Quantity, with a Design to use it not only in Dysenteries, which were ceased at the Beginning of 1719, but in Fluxes of Blood, which are so common in the Women of this Country, and so dangerous, on Account of the Use of Alum, which has been for some time past the Remedy in Vogue.

The Conjectures which I had entertained of the near Affinity of the Causes which produced those Fluxes, and certain Dysenteries, which are pretty common, induced me to make Trial of the same Drug in both these Disorders; and the continual Success which attended the Use of it on both Occasions, was so far from tempting me to make a Secret of the Discovery, that, on the contrary, it engaged me to compare all those Observations with those I had seen in our ancient Botanic Authors, concerning the Description and Effects of *Macer*, with a View of retrieving, and restoring to the Public, that previous Specific, so much extolled by them.

And such is the Matter of Fact, that in Truth it may be said, that if the *Simarouba* of the *Americans* be not the *Macer* of the Ancients, it has, at least, a very great Resemblance to it, both in Form and Effects.

The Colour of the *Simarouba* is a yellowish Grey. *Dioscorides* says, that the *Macer* is of a yellowish Colour.

Our Bark is more or less thick, in Proportion to the Age of the Tree; the same Author makes the Bark of the *Macer* to be of a competent Thickness.



## S I M

It is generally acknowledged, by all those who have spoken of the *Macer*, that it is of a very astringent Quality; this, also, is the specific Virtue of the *Simarouba*, the Decoction of which being drank, has the same Success as that ancient Specific exhibited in the same Manner.

It will, indeed, be difficult to demonstrate a perfect Agreement between the *Simarouba* and the *Macer*, because the Antients who speak of the *Macer* are not agreed as to the Tree which bears that Bark, nor about the Quality of its Smell nor Taste; and it is to the Variety of their Relations on this Head, and the Ignorance of Commentators, who confound *Macer* with *Macis*, that, I think, we ought to impute the Cause of that Oblivion into which that Drug has fallen since *Galen's* Time; for as to the Point of its being a Native of the *East-Indies*, whence *Pliny*, *Serapion*, and *Averroes*, all make it to come, *Garcias ab Horto*, *Acosta*, and *John Morquet*, who travell'd thither in the sixteenth Century, assure us, that it was a Remedy then used in the Hospitals, and that at *Bengal* they made a considerable Traffick with it.

With regard to the *Simarouba*, I shall now give you an Account of what I had an Opportunity to observe, after I had received fifty Pounds of that Drug from *M. Barrere*, Physician and Botanist, at his Return from *Cayenna*, in the Year 1723. This Bark, both as to its Inside and Outside, pretty much resembles that of the *Linden-Tree*, and is of the same stringy Consistence, which render it flexible, and hard to break; and being chew'd in the Mouth, it has a little bitterish Taste, which is very tolerable, and communicates the same to the Water in which it is boiled.

It is observ'd, that in the boiling, the Liquor grows white and spumous, like Milk, and rises considerably more in the Vessel, than the Decoctions of common Drugs; and, when it is settled after boiling, takes a reddish Colour, much like that of Small-Beer.

During almost fifteen Years last past, in which I have used the *Simarouba*, I have observed, that two Drams of that Bark boiled in a Pint and half of Water to a Pint, is enough for three Glasses, one of which is the ordinary Dose.

This simple Decoction having always better succeeded with me, than the Powder of the Bark and its Wood, I prescribe it with the more Freedom, in that it is not at all disagreeable to the Taste: But since we meet with some Patients, who had rather take the *Simarouba* in Powder, the Bark or its Wood must be rasped, almost in the same Manner we rasp Tobacco, and exhibit twelve or twenty Grains every three Hours, either in Pills, or in a Spoonful or two of Broth. This Manner of exhibiting it, seems preferable to that practis'd by the *Indian* Physicians, who give it, as *Acosta* says, in four Whey.

Before I ventur'd to publish what I now write, I satisfy'd myself by my own Experience, that the Effects of the *Simarouba* were almost constantly the same in obstinate and slimy Dysenteries, and in bilious and bloody Fluxes, which very rarely failed of stopping at the third or sixth Glass, without any Pain, or Evacuation upwards or downwards, except in a more plentiful Discharge by Urine, which becomes high-colour'd, and sometimes, in particularly qualify'd Subjects, copious Sweats.

Almost all those who have been cured by it, have inform'd me, that as soon as they had taken the second Glass of the Decoction of *Simarouba*, they felt inwardly a dull Kind of Motion throughout their whole Body, which they call'd a *Combating with the Disease*, much like to the Effects produced by the *Quinquina*, when being seasonably administer'd it puts a sudden stop to the Return of the feverish Fit.

In short, though I have seen sick Persons, who were very much extenuated, and had lost all Appetite, recover, after the Use of this Medicine for two Nights, a Serenity and Composure of Spirits, which were the Prognostics of approaching Health, and have their Sleep and Appetite, in a surprizing Manner, restored, yet I have met with some Subjects, who, either through Want of Regimen, or from some Remains of the Disease, have relapsed some Days after their Restoration, but by renewing the Use of the same Drink for two or three Days together, the Disease has at last been totally subdued.

Though such are the good Effects of the *Simarouba*, as I can attest from my own Experience, it must, however, be confessed, that it would be dangerous, or at least of no Service, to use it in Fluxes, Floodings and Dysenteries, where an Evacuation of the *Primæ Viæ* might first be necessary before we think of strengthening the Intestines; because the Constipation which succeeds the Use of this Remedy, and continues for two or three Days, might occasion some Congestion and Settlement of the Humours in some particular Part, especially in Subjects where the Kidneys are obstructed, or when the Party is not free to sweat: Hence it appears to me adviseable, not only to have recourse to general Reme-

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dies, before the Use of the *Simarouba*, but also to be careful to proportion the Dose to the Condition of the Patient.

If we might judge by that slight Relish of Bitterness perceiv'd in chewing the *Simarouba*, as well as by the whitish and milky Colour it communicates to the Water in which it is boiled, and by the Readiness with which it represses the most stubborn and inveterate dysenteric Fluxes, not only by putting a Stop to the Blood mixed with the Stools, but by restoring the Excrements to their natural Consistence, we may be pretty confident, that there enters into its Composition an acrimonious, saline Matter, involved in oily and balsamic Particles; for its Bitterness, and the Recovery of lost Appetite, which it procures, depend on that acrimonious Matter, which becomes stomachic; the milky Colour which the Water receives from it in boiling, indicates it to be endu'd with an unctuous, balsamic Quality, the certain Proofs of which are, that calm Compofure of Spirits, and sudden Cessation of all griping and wringing Pains, and others of any Kind whatever; and, lastly, by its quick Suppression of the Hæmorrhage, and that considerable Constipation of the Belly which it procures, we are convinced of its vulnerary and astringent Virtue, which was the most valuable Qualification of the *Macer* of the Antients.

The Discovery of a Specific for the Cure of certain Dysenteries, which yielded not, in these Countries, to the Use of *Ipecacuanha*, nor to other Remedies celebrated for curing that Distemper, is not the only Fruit which the Public may reap from the Observations here made; they instruct us besides, and let us see that all Plants have their Use, and that we ought not slightly to lessen the Number of those which are useful, by retrenching such as have not all their Properties display'd before us; that it is the Duty of the practical Physician to cause a proper Value to be set on such Remedies, and Assistances, which would come insensibly to be neglected, if Botany were to be regarded only as a Science of pure Curiosity; but that without the Lights afforded us from Botany, it would be impossible to come to the Knowledge of a considerable Number of Specifics indicated by the Antients, and lost for many Ages; and, lastly, we learn what Precautions are necessary in the Use of Things recommended to us and extolled by Travellers, that we may not employ them but in such Cases, and under such Circumstances as require their Assistance. *Memoires de l'Acad. des Scienc. 1729. par M. de Jussieu.*

**SIMBOR MANGIANAM**, *sive Cornu Alcis*. Bontii. The Name of an *Indian* Plant, which grows near the Sea in *Java*, and the Kingdom of *Bantam*, of the Figure of an Elk's Horn. It is said to be emollient and resolute; to loosen the Belly, and kill Worms, if bruised and apply'd to the Region of the Navel. It is, farther, us'd as a Resolver of cold Tumors. *Lemery des Drogues.*

**SIMIA**. Rati Synop. A. 148. Aldrov. de Quad. Digit. 225. Jons. de Quad. 96. Schw. de Quad. 121. Charlt. Exer. 16. Gesn. de Quad. Digit. 147. **THE APE.**

The Parts in Use are the Stone, or *Bezoar Simiæ*, which is sometimes found in the Stomach of this Animal, the Heart, and the Flesh. The Heart roasted, or boiled in Hydromel, sharpens the Sight. The Flesh is cold and dry, austere, of very bad Juice, and unfit to eat. *Dale from Schwenckfeld.*

**SIMIA** is, also, a Name for a Fish found in the Nile.

**SIMILA**, or **SIMILAGO**. The same as **SEMIDALIV**. Fine Flower, or Meal.

**SIMITAS**. A Flatness of the Nose.

**SIMIVULPA**. The Name of an Animal mention'd by *Aldrovandus*. It is thus call'd, because it resembles an Ape, and a Fox. It is of no Use in Medicine.

**SIMITIUM**. Cerufs. *Rulandus*.

**SIMOS**, or **SIMOTHES**. Cerufs. *Rulandus*.

**SINAPELCEON**. Oil of Mustard Seed.

**SINAPI**.

The Characters are;

The Pod is full of very tart Seeds, which are of a roundish Figure, and of a very hot Taste, and ends in a fungous Horn full of the like Seeds.

*Boerhaave* mentions fourteen Sorts of *Sinapi*, which are;

1. *Sinapi*, *Rapi folio*. C. B. P. 99. *Tourn. Inst.* 227. *Boerb. Ind. A.* 2. 13. *Sinapi*, Offic. *Sinapi sativum*, Ger. 189. *Sinapi sativum alterum*, Ger. Emac. 244. *Sinapi sativum secundum*, Rati Hist. 1. 803. Synop. 3. 295. *Sinapi sativum Rapi folio*, Park. Theat. 83. *Sinapi siliqua latiusculâ glabrâ, semine rufo, sive vulgare*, J. B. 2. 855. *Eruca Rapi folia*, Rupp. Flor. Jon. 64. **COMMON MUSTARD.**

Common Mustard has the lower Leaves large, rough, and pretty much resembling Turnep Leaves. The Stalk grows to be three or four Foot high, smooth, much branched, and having several smaller Leaves than those below,

[ \* Y y ]

thick,



thick, smooth, and less cut in, but yet a little sinuated about the Edges, and hanging downwards on long Foot-Stalks. The Flowers are small and yellow, of four Leaves a-piece, set many together, and flowering by degrees; before they have done flowering, the Spike of the Seed-Vessel is extended to a great Length; they are squarish, clasping close to the Stalks, and sharp-pointed at the End, full of round, dark, brown Seed, of a hot biting Taste. The Root is whitish, branched, and full of Fibres, but perishes after it has ripened it; the Seed grows frequently in waste Places, and among Rubbish, and is frequently sown in Gardens, flowering in June.

The Seeds are used, and of them is made the Sauce of so common Use, called Mustard, which is a wholesome Condiment, provoking an Appetite, strengthening the Stomach, and helping Digestion. It is, also, good for the Head, and useful in Apoplexies, Lethargy and Palsy, especially of the Tongue. The Seed bruised and infused in Wine or Ale, is of great Service against the Scurvy and Dropsy, provoking Urine and the Menfes. Mustard outwardly applied, is very drawing and ripening, and laid on paralytic Members, it recalls the natural Heat. *Miller's Bot. Off.*

Mustard Seed, by the chymical Analysis, gives a much greater Indication of an acrid than an acid Salt; but it affords a considerable Quantity of Oil, very little fixed Salt simply saline, a great deal of Earth, a little urinous Spirit, and no volatile concrete Salt.

This Seed is stomachic, diaphoretic and antiscorbutic; it is good for the Hypochondria, Green Sickness, Cachexy, and sleepy Distempers. It is proper for such as are threatened with an Apoplexy, to chew Mustard-Seed in the Morning fasting. The following Cataplasm gives great Relief in Rheumatisms of the Breast:

Fry some Leeks, cut small, with a little Vinegar; when they are enough, strew them with a little bruised Mustard-Seed: Apply this Cataplasm to the Part affected; it is very resolvent, and will raise Blisters if you put in a good deal of Mustard.

Some make a Cataplasm with Turpentine, Pidgeons Dung and Mustard, and apply it to the Parts affected with the Gout, and even to the Jaw in a violent Tooth-ach. *Martyn's Tournefort.*

It heats and dries, incises, attenuates, and attracts. Its principal Uses are to excite an Appetite, promote Chylification, and purge the Head. Outwardly it is used in a Sinapism, being put in the Nostrils, or applied to other Parts. It breaks mature Tumors, and excites Sneezing. *Dale from Schroder.*

When Mustard is calcined, it leaves very little Salt in the Ashes, because the Salt is volatile, and flies off in the Calcination.

We have given the Distillation of Mustard-Seed under the Article ALKALI. And must here remark from *Boerhaave*, that Mustard, and other acrid Vegetables, prove excellent Medicines, when prudently given in Distempers attended with an indolent, watery, or cold phlegmatic Humor, no way saline, where acid Humors are lodged in the first Passages; where the Bile is sluggish, and where no alkaline, fetid, or only putrid Matter is lodged; but the Body remains cold, torpid, and swelled all over; as, on the other hand, they prove hurtful, where the Body is hot and feverish, the Bile sharp, the Juices putrid, the Parts inflamed or wasted; or where the putrid Scurvy abounds.

Oil of Mustard, by Expression, is prescribed with Success in the severest Fits of the Stone. But this Oil, by Expression, is more mild, and by no means like Oil of Mustard-Seed, which is procured by Distillation, and is extremely acrid and igneous.

2. Sinapi; Apii folio; siliqua hirsuta; semine albo, aut rufo. *Boerh. Ind. A. 2. 13. Tourn. Inst. 227. Sinapi album, Offic. Sinapi Apii folio, C. B. P. 99. Sinapi album, siliqua hirsuta, semine albo vel rufo, J. B. 2. 856. Raii Hist. 1. 802. Synop. 3. 295. WHITE MUSTARD.*

This Mustard seldom grows so tall as the former, but it is rather more branched; its Branches are fuller of Leaves, which are rough and hairy, and more divided than the former. The Flowers are larger, and of a deeper yellow Colour; the Seed-Vessels stand out farther from the Stalks, are very hairy, ending in a long empty Point, containing four or five white Seeds, which are larger than the common, and make the Seed-Vessels appear knotted. They are not quite so hot as the other. This grows wild in several Places, but not so frequently as the former, flowering about July.

This is much of the Nature of the common Mustard, and some prefer it before that to make their Sauce, because it is less bitter, and pleasanter to the Taste. *Miller's Bot. Off.*

3. Sinapi arvense; præcox; semine nigro, *Tourn. Inst. 227. Boerh. Ind. A. 2. 13. Rapistrum, Offic. Rapistrum arvenum, Ger. 179. Emac. 233. Park. Theat. 862. Raii Hist. 1. 802. Synop. 3. 295. Rapistrum flore luteo, J. B. 2. 844. C. B. P. 95. Eruca arvensis vulgaris, Rupp. Flor. Jen. 64. CHARLOCK.*

It is frequently found among the Corn, flowers in Summer, and the Seed is used. It is of a drying, deterfive, and somewhat digestive Quality, and provokes Urine. *Dale from J. Bauhine.*

4. Sinapi; Indicum; Lactucæ folio, *Par. Bat. 230.*

5. Sinapi; Indicum; Lactucæ folio; minus, seu angusta profundius crenato, *Par. Bat. 230.*

6. Sinapi; arvense; album; hyemale; folio Rapi; semine luteo.

7. Sinapi; Hispanicum; pumilum album, *T. 227.*

8. Sinapi; quod Sinapistrum; luteum; minus; folii quernis.

9. Sinapi; quod Sinapistrum; Siculum; filiquis Irionis.

10. Sinapi; arvense præcox; semine nigro; foliis integris, *T. 227. Rapistrum flore luteo, foliis non incis, C. B. P. 95.*

11. Sinapi; Siculum; luteum; minus; folio Rhapontici.

12. Sinapi; quod Sinapistrum; Syriacum; folio Irionis; altissimum.

13. Sinapi; Chinense; folio Acanthi.

14. Sinapi; Hispanicum; folio glauci violacei. *Nasturtium sylvestre, Eruca affinis. C. B. P. 105. Boerh. Ind. Alt. Plant.*

If Mustard-seed be eaten crude, the Vapour excited in the Mouth not only provokes Tears, but a Tumor, Itching and Sneezing. Externally it serves for the Sinapismus of the Ancients, which consisted in bruising the crude Seeds into a Poulitice, and applying it to the Part where an Exulceration was to be raised; but if this be often repeated, it causes a Gangrene. As to internal Uses, it is proper where an inert, aqueous, or phlegmatic Humor is predominant. I observed a surprising Effect of it on a Girl at *Amsterdam*, who labouring under Convulsions, after she had tried all manner of Remedies in vain, was, at last, by the Advice of *Ruyfch*, cured by the Use of crude Mustard bruised with Wine. What is commonly called *Mustard*, is a Sauce made of the bruised Seed, and is so named because in *Italy* they made it with *Must*, whence they called it *Mustum ardens*, and by Contraction *Mustard*. This Sauce, with Vinegar, is very serviceable in digesting Food, and would be very proper for our (*Dutch*) Sailors, because it is an excellent Preservative against the Scurvy. The Seeds are attenuating and incising; for which reason Mustard is always added as a proper Sauce to Meats dried and hardened in the Smoke. The Seeds are, also, of Service, whether used internally or externally, in hypochondriac Disorders, Inflations of the Stomach, Obstructions of the Spleen, and other Diseases proceeding from an Acid, of which Nature are the Scurvy, Cachexy, Chlorosis, and soporous Affections; they also stimulate to Venery, and provoke Urine. The expressed Oil is externally applied in the Palsy and cold Diseases; the Seeds are also applied in a Quartan, and sometimes in a quotidian Fever.

There is a new Plant, which may be reckoned a fifteenth Species under the Name Sinapi; luteum; Chelidonii quernifolio. *Hist. Plant. ascript. Boerhaave.*

SINAPI ALBUM. A Name for the *Turritis*; foliis inferioribus cichoraceis; ceteris Perfoliatae.

SINAPI ECHINATUM. A Name for the *Erucago segetum*.

SINAPI MONSPESSULANUM. A Name for the *Sisymbrium*; palustre; minus; siliqua aspera.

SINAPISIS. Armenian Bole. *Rulandus.*

SINAPISMUS, σιναισμός. A Sinapism; that is, a Cataplasm of Mustard-Seed, applied with a View of exciting a Heat and Redness of the Skin.

SINAPISTRUM.

The Characters are;

The Leaves grow three or five on one Pedicle, and are digitated. The End of the Pedicle thickens into a Placentula, whence arises the Calyx, consisting of four small Leaves of the Colour of the Flower. The Flower is tetrapetalous, the four Petals being erected above, and six Stamina taking up the inferior void Part of the Flower. The Ovary grows out of the lower Part of the Placenta, three balsamic Spheres being seated at the upper Parts, is extended forwards, and becomes a cylindrical, bivalve, unicapsular Pod, full of many roundish Seeds placed all in one Row.

*Boerhaave* mentions four Sorts of *Sinapistrum*, which are;

1. Sina-



1. Sinapistrum; Orientale; triphyllum; Ornithopodii filiquis. *T. Cor.* 17.

2. Sinapistrum; Indicum; pentaphyllum; flore carneo; minus; non spinosum. *H. L. Pentaphyllum; peregrinum; filiquosum; bivalve minus*, M. H. 2. 288. *Quinquifolium filiquosum*, Alpin. Exot. 322.

3. Sinapistrum; Lusitanicum; triphyllum; flore rubro; filiquis corniculatis. *H. L. Trifolium; Lusitanicum; bivalve; flore rubro*, M. H. 2. 289.

Sinapistrum; Indicum; triphyllum; filiquâ maximâ; flore albo. *Boerh. Ind. Alt. Plant.*

This Plant was so called by *Herman*, as if it were a smaller Kind of *Sinapi*, because in Figure and Acrimony it is so very like the *Sinapi*, that it may be used in its stead. *Hist. Plant. ascript. Boerh.*

SINAPIUM. Mustard; that is, a Preparation of Mustard for culinary Uses, and such as is used in Food.

SINCIPUT. The anterior Part of the Head. See CAPUT.

SINE PARI. The *Vena sine pari* is the same as *Azygos*. The *Emplastrum sine pari*, the matchless Plaster, is the pompous Title of a Plaster described in the Old College Dispensatory, but left out of the last.

SINGULTUS. The Hiccup.

As Respiration consists of Inspiration and Expiration, so it may be injured with respect to either of these two. The Faults of Expiration are treated under the Article Tussis; but to the Disorders incident to Inspiration, belongs that by the *Greeks* called *λυγμός*, or *λυγμός*, and by us the *Hiccup*, which may be defined a Spasmodico-Convulsive, interrupted and uneasy Concussion of the Diaphragm, and some of the Parts affix'd to it, made in Inspiration, and accompanied with a sonorous Explosion of the Air thro' the Mouth.

In order the better to explain the Nature of this Disorder, we shall premise some Things concerning the Structure of the Parts which concur to its Production. The first, then, of these which occurs, is the Diaphragm, which in all its Circumference is muscular; has Fibres which run from the Center to the Periphery; is tendinous in its Center; divides the middle from the lowest Cavity of the Body, by its transverse, and at the same time somewhat oblique Situation, since it is higher before, and somewhat depressed towards the posterior Parts. Towards the Thorax it is convex, but towards the Abdomen concave. It is furnished with pretty large Nerves, partly from the vertebral Nerves of the Neck, and partly from the intercostal Branch and the Par Vagus. It has two Perforations, the Right of which, in a tendinous Circle, transmits the Vena Cava; the Left, in its muscular Part, transmits the Oesophagus and Par Vagus. The Diaphragm, also, adheres to various Parts; for on the anterior Part it adheres to the Ribs, Sternum and intercostal Muscles; in the middle Parts, by means of the Pleura surrounding its convex Surface, to the Mediastinum; to the Stomach, not only by the Nerves, and exterior Coat produced from the Peritonæum, common to them both, and surrounding the concave Part of the Diaphragm, but, also, by means of the left superior Mouth of the Stomach, by the *Greeks* called *καρδία*; to the Liver and its gibbous Surface, by the Ligamentum latum. And at the posterior Region, it is firmly fix'd to the Lumbar Vertebrae, by two muscular and tendinous Appendices.

In Consequence of this Connexion of these Parts, a Change of Place in one of them must be succeeded by the Motion of the others, as we are taught by Respiration in its natural State; for in the first Act of Respiration, which is Inspiration, the intercostal Muscles partly draw the Ribs upwards, and partly forwards; and partly the Fibres of the Diaphragm, which is muscular, contracting, and becoming short from the Center to the Periphery, the Diaphragm is chang'd from a convex to a more plain Figure. Immediately the adjacent Parts imitate this Motion, and the whole Abdomen is drawn upwards and forwards, the Stomach, in the mean time, being compressed by the Abbreviation of the Fibres of the Diaphragm. But all these Parts return to their former Situation, when in Expiration the Diaphragm resumes its convex Figure. Hence it follows, that when the Thorax and Abdomen are drawn upwards and forwards, and the Cavity of the Breast enlarged, then Inspiration is performed, and Expiration when the contrary happens.

Now to apply this Doctrine to the Hiccup; Though the Diagnostic of this Disorder is easy, yet from accurate Attention, we find its History to be as follows. The Breast is exagitated with a quick Impetus, accompanied with an acute Sound. Under this Exagitation, the Thorax and Abdomen are raised, the Cavity of the Breast becomes larger, the Speech of the Patient is intercepted; and the Pain is fre-

quently so great, that, according to *Delæus*, in *Encyclop. Medic. Lib. 3. Cap. 2.* the whole Body seems to be thrown into a Commotion, and the Ribs, as it were, broken. The Sound with which this Disorder is accompanied, is sometimes so great, as to resemble the Barking of a Dog, and be heard by Persons passing in the Streets, or living in the Neighbourhood, as we are informed by *Lazarus Riverius, Obs. 1. Thomas Bartholinus, Histor. Anat. rarior. Cent. 2. Histor. 4.* and *Vitus Riccilinus, in Obs. 31.*

These Circumstances, compared with the Phænomena of Inspiration, sufficiently inform us, that the Hiccup is a Disorder of that Part of Respiration, or at least happens under it. For as in natural Inspiration, a Motion of the intercostal Muscles is observed to precede; and a Constriction of the Diaphragm, and, at last, an Elevation of the Abdomen to follow; and all these are performed in a slow and gentle manner; so, on the contrary, in a Hiccup, as being a preternatural Inspiration, there is first observed a Constriction of the Diaphragm, and in consequence of the Consent, a Motion of the Parts affix'd ensues; but all these happen quickly, and with Violence. When the Diaphragm is thus suddenly exagitated, the Throat and Stomach must of Course be so too. Hence a Part of the Air taken in being lodged in the Gula, is with a violent Impetus forced upwards thro' the whole Oesophagus, and, at last, in the Palate, which is vaulted, forms that Noise commonly called the Hiccup. See *Langius in Pathol. Animat. Cap. 36.* At last the exagitated Diaphragm, when the Noise is discharged, is more or less slowly rendered convex; that is, its muscular Fibres are again lengthened. Hence arises Ease, and the convulsive Exagitation only returns by Intervals.

Since, therefore, the Hiccup is a very quick Convulsion of the Diaphragm, but remits and recurs at certain Intervals, it is to be distinguished from that spasmodic Distension which keeps the Diaphragm long rigid, and produces a perpetual Difficulty of Breathing. See *Caspar Hoffman, Inst. Med. Lib. 2. Cap. 86. Sect. 6.* and *Galen de Sympt. Lib. 2. Cap. 2.* The last mentioned of these Disorders is observed to approach to a convulsive Colic, or to violent hysteric Paroxysms, but is not accompanied with that Noise familiar to those afflicted with the Hiccup.

It is, also, to be observed, that there is a great Difference between a chronical and an acute Hiccup; since the latter is observed to accompany acute Disorders, such as continual, malignant, exanthematous and pestilential Fevers, and Inflammations of the more noble Viscera. This Species of the Disorder is not only of a short, but also of a dubious Termination. A chronical Hiccup, on the contrary, generally accompanies long protracted Disorders, such as those of the hysteric and cachectic Kind, a bad State of the Primæ Viæ, or a bad Conformation of the Parts subservient to Respiration. And this Species of the Disorder may remain for several Days, Weeks, Months, or even Years. Thus *Bartholine, in Cent. 3. Epist. 61.* gives us an Account of a Woman, who for two Years laboured under so violent an Hiccup, that she seemed to be possessed by a Devil. And in *Cent. 2. Hist. 4.* he mentions an Hiccup which lasted for four Years. Other Authors give other Instances of the same Kind; a large Number of which are found in *Marcellus Donatus, Lib. 4. Hist. Med. Cap. 5.* and *Schenckius, in Obs. Lib. 3.*

Physicians entertain various Opinions with respect to the Seat of the Hiccup. The Ancients, and among the rest, *Hippocrates, in Aph. 36. Sect. 6.* accused the Stomach alone, and affirmed that the Hiccup was a violent Commotion of it, by which it endeavoured to expel something offensive to it. But left by this means they should confound it with a Vomiting or Eructation, they asserted, that by an Hiccup those Things which were lodged in the superior Orifice of the Stomach, were exagitated; whereas, in a Vomiting, the Substances in the Bottom of the Stomach were thrown into a Commotion. See *Forestus, Obs. 12. Lib. 18.* Others, the most considerable of whom is *Felix Platerus, in Lib. 2. de Funct. Læsson. Cap. 5.* have placed the Seat of the Hiccup in the Diaphragma alone, when they saw that the former Opinion would not account for all the Phænomena of the Disorder. Others steering, as it were, a middle Course, affirm that the superior Mouth of the Stomach is primarily affected, but that by Consent the Diaphragm is always exagitated. The most considerable Abettor of this Opinion is *Delæus, in Encyclop. Med. L. 3. Cap. 2.*

But, in my Opinion the principal Seat and Organ of this Disorder is the Diaphragm; for without the Assistance of this transverse Muscle there could be no Inspiration; a preternatural Effect of which the Hiccup is: for since the superior Mouth of the Stomach firmly adheres to the Diaphragm,



phragm, that, as well as the Oesophagus, must necessarily be affected in this Disorder. Hence appears the Reason of dividing Hiccups into those of the idiopathic and those of the sympathetic Kind; the former of which is, when the immediate Cause of the Disorder is lodged in the Diaphragm itself; and the latter when the Cause resides in the Stomach, whose Vellication is propagated to the Diaphragm.

The immediate Cause of the Hiccup, is an Irritation or Stimulation, either of the Diaphragm or Stomach, and a convulsive Exagitation of the Parts induced by that means. For this Reason, the weaker the nervous System is, the more readily any Person is seized with this Disorder. Hence Infants, Children, and old Persons, are more subject to the Hiccup than others; so that they easily fall into that transitory Species of the Disorder which we do not here treat of, and which is produced either by a Refrigeration of the Stomach, greedy Drinking, drinking excessively cold Liquors, or Laughter. But the more secondary and remote Causes which concur to promote a morbid Hiccup, which requires the Physician's Aid, easily exert their Influence on such Patients, and are these following.

This Disorder, then, is very readily produced by a cold and moist Air, especially when the Patient is hot. Those who, contrary to their Custom, walk with their Breasts bare, or only slightly covered, or who walk upon cold Floors with their Feet bare, the more tender they are the more readily they are seized with an Hiccup. And Infants whose Fontanels continue to beat, and are not yet closed, are very frequently seized with this Disorder. *Carolus Raygerus*, in *M. N. C. Dec. 1. Anno. 6. Obs. 211.* gives us an Account of an Hiccup which lasted for three Days, and was produced by staying too long in the Water. But *Riverius*, in *Cent. 3. Obs. 42.* furnishes us with a still more memorable Case of a certain Girl, who was violently afflicted with the Hiccup during the Winter, but was freed from it every Summer.

Aliments either of a bad Quality, or used in too large a Quantity, produce an Hiccup. Voracious Eating alone, in which one Mouthful or one Draught immediately follows another, and remains in the superior Orifice of the Stomach, by vellicating it, produces an Hiccup, though of a slight Kind. Thus *Forestus*, in *Lib. 18. Obs. 12.* informs us, that an Hiccup was produced by a Piece of an Oxes Lungs remaining in the Oesophagus. Aliments, also, which by their too great Quantity load the Stomach, produce the same Misfortune, as is obvious in voracious and glutinous Children. And *Epiphanius Ferdinandus*, in *Hist. Med. 43.* informs us, that Bread alone eaten too greedily and in too large a Quantity produces an Hiccup. Liquors drank in too large a Quantity, especially if the Person is exposed to cold, or if the Liquors themselves are too cold, produce a Cough, as we find from Experience, among those Topers, who remain with their Breasts bare when drinking; and among sucking Children, if cold Malt Liquors are exhibited to them. *Timaeus a Guldenkle*, *Lib. 3. Caf. 5.* gives us an Instance of an Hiccup produced in a Man, who being pretty hot, drank a large Quantity of cold Water with Nitre. And *Riverius*, in his *Treatise de Morb. infrequent. Obs. 1.* informs us, that a violent Hiccup of half a Years Continuance was produced by a Draught of cold Water.

Whatever Aliments are either too acrid of themselves, or from various Causes degenerate within the Stomach into an acrid and viscid Sordes, capable of vellicating its Coats, produce a more or less violent Hiccup. Every one knows, that Milk and its Preparations becoming corrupted in the Stomachs of Children, produce the Hiccup; a fatal Instance of which is alledged by *Bartholine*, in *Aet. Med. Hassn. Vol. 2. Obs. 28.* The same holds true, with respect to acrid and caustic Substances, or such as are absolutely poisonous. *Guldenkle*, in *Lib. 7. Caf. 4.* mentions an Hiccup produced by eating Hemlock. The same Author, in *Caf. 7.* gives us an Instance of one produced by Euphorbium. *Gatinarias, de Cognit. & Curat. Aegrit.* gives us Instances of its being produced by Onions, Garlick and Ginger. *Barbette*, in his *Prax. Med. Lib. 4. Cap. 2.* informs us, that he knew an Hiccup produced, by taking Oil of Vitriol instead of Balsam of Sulphur. And *Skenckius*, in *Lib. 3.* tells us, that Hiccups are produced by the too liberal Use of refrigerating and acid Julaps in acute Disorders. Among the Things capable of exciting this Disorder, we may, also, reckon drastic Vomits and Purges, especially those prepared with Hellebore, which, by corroding, stimulating, and inflaming the Stomach and Intestines, dispose to an Hiccup.

Acrid and corrupted Humours, impregnated with many saline Parts, and acting on the Diaphragm, excite the quickest and generally fatal Exagitations of it. I knew a Man, who being for thirteen Days afflicted with a violent Hiccup, at last died; and upon opening his Body, some Ounces of extravasated acid Serum were found in his Thorax. To this Species,

also, belongs that kind of Hiccup which is produced by the Translocation of an arthritic or gouty Matter to the Diaphragm. An Instance of this kind arising from repelled arthritic Pains is mentioned by *Georg. Hieron Velschius*, in *Hecat. 2. Obs. 54.* Hiccups are, also, produced when Diarrhoeas or Dysenteries are check'd in the Beginning, or suppressed by means of Opiates, or other Astringents, as is observed in *Hoffman's Notes, ad Poter. Cent. 2. Cap. 47.* A repelled Erysipelas, or in old and weak Habits, one not sufficiently expelled, is frequently accompanied with an Hiccup. All these Effects depend on an acrid, and, as it were, caustic Matter insinuating itself into the nervous Parts of the Diaphragm, or the superior Orifice of the Stomach.

An acute Hiccup is the Concomitant of such Disorders as have a quick and speedy Termination, of which the most considerable are Inflammations of the more noble Viscera. Thus an Hiccup succeeds Wounds or Inflammations of the Diaphragm, as appears in a Paraphrenitis; as, also, Wounds or Inflammations of the Stomach or Intestines, according to *Forestus*, in *Lib. 18. Obs. 12.* Hiccups, also, succeed Phlegmons of the Liver, according to *Celsus*, *Lib. 2. Cap. 7.* and *Barbette*, *Prax. Med. Lib. 4. Cap. 2.* And the pathognomic Sign of this Disorder, is a Pain ascending to the Throat. Inflammations, and violent Wounds of the Brain and Meninges, by reason of the Consent these Parts have, by means of the Par Vagus, with the Stomach and Diaphragm, also, produce Hiccups in a violent Degree. See *Hippocrates, Sect. 7. Aph. 3.* and *Heurnius*, in his Comment upon the same Aphorism.

An Hiccup generally accompanies continual, malignant, and exanthematous Fevers, when various remote Causes concur to its Production; for an Hiccup is either produced by a concomitant Inflammation, which, according to *Diemerbroeck*, *Cap. 13. Sect. 5.* and *Cap. 15. Annotat. 15.* principally happens in the pestilential Fever, from a Carbuncle on the Diaphragm or Stomach; or if the due Progress of Fevers is preposterously disturbed by Anodynes and Opiates, an Hiccup succeeds; a memorable Instance of which we have in *Riverius*, *Cent. 3. Obs. 17.* Hiccups, also, succeed the Repression of Sweats, and the Stopping or Repulsion of exanthematous Disorders; or Hiccups accompany an acrid Sordes of the Stomach; an Instance of which, in that Species of Fever called *Hemitritaea*, *Forestus* gives us in *Lib. 5. Obs. 15.* In these Cases, dangerous Symptoms appear, such as insatiable Thirst, considerable Weakness, Watchings, Deliriums, an unextinguishable Heat, a tremulous Motion of the inferior Jaw-Bone, Convulsions of the Nerves, Interception of the Voice, and a Thinness of the Urine: On the contrary, if the Hiccup happens about the critical Days, and the other Signs, especially that of Coction in the Urine, are good, it portends no Ill, but prognosticates a critical Vomiting or a Flux, after which it ceases. These acute Fevers are, also, sometimes attended with an Hiccup, which remains with them, and is augmented through the whole of the Fever. An Instance of which we have in *M. N. C. Ann. 4. Obs. 48.* Of this Kind, also, is the memorable Case related by *Poterius*, in *Cent. 2. Cap. 47.*

To the acute Hiccups of a dubious Event, we must, also, refer those which, according to the Ancients, succeed Inanition, or too large an Excretion of the Humors. That excessive Vomiting or Purging are accompanied with an Hiccup, is confirmed not only by Experience, but also by *Hippocrates*, in *Sect. 7. Aph. 3.* and *41.* and *Sect. 5. Aph. 41.* and by *Sydenham*. Hiccups, also, succeed violent Haemorrhages, whether natural from the Uterus, or from the Nostrils, or by a Spitting of Blood, or produced by violent Wounds, as *Hippocrates*, in *Sect. 5. Aph. 3.* informs us. In these Cases, the Hiccup, generally, as the last Efforts of Nature, precedes universal Convulsions and Death.

A chronical Hiccup sometimes arises from a peccant State of the Blood and Humors; when, for instance, these are either impregnated with any Acrimony, or in Consequence of a Retention of the usual Excretions, too copiously congested in the Vessels of the Diaphragm and Stomach. Hence the Hiccup is very familiar to pregnant Women during the last Months of their Gestation; as also to hysteric Women, whose Menfes do not flow duly. Thus *Schurigius*, in *Parthenol.* gives us an Account of a Woman who, before the Eruption of her Menfes, was always afflicted with an Hiccup, which ceased as soon as these began to flow. Chronical, as well as periodical Hiccups, generally afflict cachectic Patients, and such as labour under Indispositions of the Liver; in which Cases, the Cause is to be sought for in the Bile become acrid and vellicating the nervous Coats of the Stomach and Duodenum. Hence *Lentilius*, in *Jatrom.* mentions an Hiccup, which in a cachectic Patient lasted till a Vomiting ensued.

The Faults of the bony Parts surrounding the Breast, and a bad Conformation, sometimes contribute to the Production of



of a chronical Hiccup. Thus, if the Cartilago Eniformis is relaxed, or by any other Cause bended too much inwards, so as to stimulate the Stomach; it is forthwith observed to produce an Hiccup. Accordingly, *Fernelius* in *Lib. 6. de Part. Morb. and Sympt. Cap. 3.* mentions an Hiccup produced by a Depression of this Cartilage, which lasted for three Months. 'Tis, also, certain from Experience, that Hiccups are produced by Luxations, Fractures, and Contorsions of the Ribs; hence *Fernelius*, in the Part last quoted, gives us an Instance of an Hiccup arising from a luxated Rib, which ceas'd immediately upon the Reduction: And *Rhodius*, in *Centur. 2. Obs. 61.* makes mention of a continual Hiccup arising from a Compression of the twelfth Vertebra of the Neck.

As for the Prognostic of an Hiccup, that Species produced by Viscidities, Crudities, or an Acrimony of the Primæ Viæ, is by no Means dangerous, nor is that familiar to hysterical Women much to be dreaded. Much less is an Hiccup dangerous, when it proceeds from Refrigeration, or drinking cold Liquors, provided too large a Quantity of them is not drank when the Body is covered with a Sweat. Hiccups are frequent in sucking Children, in whom it prognosticates no Harm, but is more inauspicious in old Persons. I know a Gentlewoman of forty Years of Age, who for twenty Years has been daily afflicted with an Hiccup, without any apparent Disadvantage to her Health. But an Hiccup is more dangerous, when it happens in acute Fevers, especially those of the burning and pestilential Kind; and if a Delirium, or Convulsions are brought on, it proves mortal. An Hiccup which principally arises from an Inflammation of the Liver, is generally mortal; nor is that Species of Hiccup to be less dreaded, which is produced by acrid Purgatives, Emetics and Poisons. All Hiccups succeeding Inanition, Purging, or liberal Vomiting, are bad, but still worse, when coming after Hemorrhages and Wounds of the Head. Hiccups produced by stopping Diarrhæas, or Dysenteries, or repelling erysipelatous, gouty or arthritic Disorders, are not free from Danger. As the Hiccups attending the Fevers of old Persons labouring under Hernias scarcely admit of a Cure, they generally prove mortal, according to *Forestus* in *Lib. 18. Cap. 12.* Sneezing join'd to an Hiccup, especially that which arises from Repletion, is beneficial, and prognosticates that it will cease.

Every Hiccup does not require a Cure; for that gentle Species which arises from a long protracted Inspiration, or any Distraction of Mind, is easily terminated by exciting Pain in any Part of the Body, by thinking carefully upon any Object, or by Terror unexpectedly rais'd. But a morbid Hiccup, not yielding to these Means, calls for the Assistance of the Physician, who is principally to follow three Intentions of Cure: The first of these is, to mitigate and allay the preternatural, spasmodic, and convulsive Motions: The second is, to remove the material Causes: And the third is, to restore the Parts affected and weakened.

In order to answer the first of these Intentions, the Ancients us'd Opium, and the Medicines prepar'd of it, such as the Laudanum Opiatum, Mithridate, Philonium, Diacordium, and the Theriaca, by which, they affirm, that they cur'd the Hiccup. But I prefer gentler, antispasmodic and anodyne Substances; such as Amber, Cinnamon, Saffron and Castor; which last is so highly extoll'd by some Authors, that *Alexander Trallian*, in *Lib. 7.* seems persuaded, that an Hiccup may be cur'd by its Means, us'd in the Form of an Amulet. From a long Series of Experience, I prefer in this Disorder the anodyne Liquor, to all other Medicines, and exhibit it, either alone, or in Conjunction with Tincture of Castor. Nor is the Spiritus Nitri Dulcis less efficacious, provided it is mixed with a small Dose of the Balsam of Life. An Ounce, or half an Ounce of the Oil of Sweet Almonds mix'd with a few Drops of the distill'd Oil of Dill, is by some thought a Specific for the Hiccup.

But the Physician is, in a particular Manner, to pursue the second Intention, which is, to remove the material Causes. When, therefore, any Sordes lodg'd in the Stomach, by stimulating its superior Orifice, produces an Hiccup, this Sordes is to be corrected, and gently eliminated. If it is of an acrid and bilious Quality, Absorbents impregnated with Citron Juice, or the precipitating Powders, are to be exhibited in cold Water. A viscid Sordes, obstinately fixed in the Foldings of the Stomach, is to be treated with digestive Salts, especially with the Liquor of the Terra Foliated Tartari, and such Roots as are at once of a resolvent and corroborative Quality; such as the Roots of Swallow-wort, which has something of an anodyne Nature in it, and those of the Calamus Aromaticus. The peccant Matter, when duly concocted, is to be eliminated either by Vomit or Stool; the former of these Intentions is answer'd by the Root of Ipecacuana, or, which is best of all, by four or six Grains

of the Powder of Squills, mix'd with three Grains of purified Nitre. The Body is render'd soluble by Preparations of Manna and Rhubarb, by the Pilulæ Aloeaphanginæ, the Pilulæ Macrocostinæ, or the Pilulæ de Succino *Cratonis* prepared with a large Quantity of Amber: With these Pills may be commodiously mix'd a few Grains of the Pilulæ de Styraçe, or of the Pilulæ de Cynoglossæ, by which Means they answer a double Intention. In this Case, also, gently carminative Clysters are sufficiently safe, especially in Infants, whose Hiccup is produced by corrupted Milk, in which Case, Sulphur of Antimony duly corrected, or Aurum Fulminans well prepared, and exhibited in a small Dose, are, also, of singular Service.

If an Hiccup arises from a Suppression of Perspiration by Cold, or any other Cause, the Physician ought principally to attempt the recalling of this Evacuation, besides being kept temperately warm; this Intention is answer'd by Fomentations of the Parts affected, liberal Draughts of warm Liquors, and Infusions of resolvent and corroborating Roots and Herbs, in which it will be expedient to exhibit a proper Quantity of the bezoardic Powders prepared of Amber, calcin'd Hartshorn, Diaphoretic Antimony, Cinnabar, and a small Quantity of the Extracts of Saffron and Castor. In this Case, the Spiritus Bezoardicus Rustii, mixed with the anodyne mineral Liquor, and the Essence of Castor, is an excellent Medicine. When in acute and exanthematous Fevers an Hiccup arises from a Suppression of Transpiration, besides a proper Regimen, Frictions and fix'd Diaphoretics are most properly us'd. In a chronical Hiccup arising from a Refrigeration, and of an obstinate Nature, drinking the *Hippocratic* Wine affords Relief: Besides this, hot Baths are of singular Efficacy, since they not only recall a Diaphoresis, but, also, soften the spasmodically constricted Parts, which *Riverius* in *Obs. Infrequent.* evinces by an Example.

The same Method of Cure is to be observed in an Hiccup arising from an erysipelatous, arthritic, or gouty Matter repell'd, or not sufficiently expell'd: For in this Case, besides the Diaphoresis to be obtain'd by the already mention'd Medicines, it is expedient to recal the acrid and peccant Matter from the phrenic Nerves to its former Seat: For answering this Intention, mild Laxatives and Clysters are of singular Efficacy; Sinapisms, also, and Velicatories applied to the Scapulæ, or Calfs of the Legs, afford great Relief, by drawing off the acrid Serum. When a Gout is receding, it is of singular Service frequently to bathe the Feet in warm Baths: For this Reason *Trallian* in *Lib. 7.* and *Riverius* in *Prax.* highly commend the Immersion of the Hands in warm Water.

When by the Exhibition of an Emetic, a Purge, a caustic Medicine, or a Poison, an Hiccup is excited, such Things are to be us'd as destroy and enervate the Force of the Poison, among which none are more valuable and efficacious than pinguious Substances, Oil of Sweet Almonds, Oil of Olives, mucilaginous Substances, Milk and Cream exhibited seasonably, and before the Inflammation has seiz'd the Part; thus the Poison being sheath'd up, its irregular Motion is to be check'd by the above-mentioned Anodynes. But if the Hiccup proceeds from a Poison received by Contagion, as in the Plague, from the Bite of a mad Dog, or the Sting of any Insect boiling with Rage, then theriacal Medicines, Treacle-Water, and the Theriaca Celestis, in Conjunction with nitrous, antispasmodic and diaphoretic Substances, and Camphire and Cinnamon, afford the greatest Relief. This Method of Cure is, also, to be observed, when the Hiccup arises from a malignant, caustic, or exanthematous Matter repell'd from the Surface of the Body to the internal Parts; in which Case, a Powder consisting of a few Grains of Camphire and Nitre, as, also, Emulsions of sweet Almonds, and the four greater cold Seeds prepared with the diaphoretic Waters, afford surprizing Relief.

Hiccups arising from violent Hemorrhages, are hardly to be remov'd, till the Effusions of Blood whence they proceed are stopp'd. Now, violent Hemorrhages are to be check'd by internal, temperating, tonic and astringent Medicines, and by external Means, such as proper Applications to the Part affected. When the Effusion is stop'd, we are to use safe Anodynes, in Conjunction with efficacious Analeptics: And, lastly, the Patient is to be supported by Cordials and restorative Aliments.

Nor for the Cure of an Hiccup are we to despise corroborating Medicines, especially in the Decline of the Disease; of these the most considerable are the corroborating Oils, such as those of Mace, Mint, and Worm-wood, mix'd with a few Drops of my Balsam of Life, and exhibited in some of the spirituous Waters, such as those of Cinnamon, Mint, and Baum, or aromatic Aqua Vitæ, as, also, the carminative Essence of Wedelins, the carminative Water of *Dormirellius*, or a Draught of generous Wine. The Medicines in an Hiccup



cuparising from a Retention of Flatulences, and a Vellication of the Stomach produced by them, answer both Intentions of Cure, when join'd with carminative Clysters. Among Topics, considerable Relief seems to be promis'd by applying to the Præcordia, antispasmodic, paregoric and anodyne Liniments prepared of express'd Oil of Nutmeg, human Fat, the Oils of Mace, Mint and Worm-wood, Saffron, Castor and Camphire. Nervine Cerates, and Plaisters applied to the Pit of the Stomach, as, also, Contrictions of the Parts affected by proper Bandages, seem not to be entirely useless.

An Hiccup arising from an Acrimony or Viscidity of the Stomach, is often cured by the copious drinking of warm Fluids, which sheath up the Acrimony, dilute the Viscidity, and remove the Cause of the Stimulus. But all cold Liquors render the Disorder worse.

An Hiccup succeeding a Diarrhæa, or Dysentery, unseasonably check'd, is of a dangerous Nature; for which Reason, the Means of Relief ought to be speedily us'd. In this Case, therefore, the safest and most efficacious Remedies are, Clysters prepared of emollient and gently laxative Substances, such as the Pulp of Cassia, with an Addition of Extract of Rhubarb frequently injected: But it is not expedient to exhibit Laxatives by the Mouth, for it is rather proper to correct the bilious and acrid Humours, which may be done by the Magnesia Alba, and other Absorbents, but especially by drinking sweet Whey; then we may, also, join internal Anodynes, and external Paregorics.

The Hiccup attending acute Fevers is cur'd by curing the primary Disorder, which is accomplish'd by an equable Promotion of a Diaphoresis. In this Case, we are to take great Care not to exhibit saline, much less laxative Medicines, aloetic Pills, too hot a Regimen, or very warm Drink; for as Cold, so, also, excessive Heat is unfriendly to the nervous Parts, especially if they labour under any Disorder.

For the like Reason we are to guard against the same Practice in Hiccups arising from an Inflammation of the Viscera, in which Case we must, with all Expedition, open a Vein in the Foot; if the Inflammation is as yet recent, and the Patient plethoric, then we must exhibit internally, Discutients, and other Medicines, which promote Sweat and resolve the stagnant Juices; to which, if the Pain is intense, we may add gentle Anodynes; but, particularly, the Body is to be always kept soluble by injecting Clysters; externally, Preparations of Camphire and Saffron, and discutient Bags are to be applied, the Physician at the same Time taking Care of his Reputation by a prudent Prognostic.

Hiccups seizing cachectic Persons, or those labouring under Disorders of the Liver, are cur'd by such Medicines as correct acrid Bile; that is, by resolvent, attenuating, bitter, and evacuating Infusions; and if these should prove ineffectual, nothing is more powerful and efficacious than hot Baths and mineral Waters. A memorable Instance of this is recorded in *Boet. Med. Sept. Lib. 5. Sect. 5. Obs. 6.*

An Hiccup which accompanies hypocondriac Disorders, and is generally owing to a Suppression of the natural Excretions of Blood, is not to be cur'd till the primary Disorder is remov'd. In this Case, if all other Means prove ineffectual, the hot Baths, especially the *Caroline Springs*, using at the same Time those of *Toeplitz*, are of Use for corroborating the Parts. In scorbutic Patients, an Hiccup is most properly cur'd by Asses Milk mixed with the *Selteran Waters* warm'd. This Method is commended by *Paulini* in *Onograph. Cur. Sect. 4. Cap. 3. Par. 1.*

If fractured, distorted, or luxated Ribs produce an Hiccup, the Reduction of the Luxation, and the Consolidation of the Fracture by proper surgical Measures, are only capable of affording Relief. The Cartilago Eniformis, when luxated and bended inwards, is most properly cur'd by blind Cupping-Glasses applied to the Pit of the Stomach. This Practice is greatly extoll'd by *Vitus Riedlinus Lin. Med. Anno 1695. Menf. Aug. Obs. 4.*

Anodynes must be cautiously us'd in checking Hiccups: If the peccant Matter is large in Quantity, it is above all Things to be corrected and eliminated; especially if it is of an acrid, caustic, or virulent Quality; for Anodynes, before this Matter is discharg'd, would be only adding Fuel to the Flame. As in all Disorders where an anodyne and soothing Quality is requisite, so more especially in spasmodico-convulsive Disorders of all Kinds, Opiates are rarely to be exhibited alone; but when mix'd with proper Evacuants, they are highly safe and efficacious: And this Secret of checking the Force of Opium is of an old Date, as is obvious from that celebrated Medicine of *Aesclepiades*, mentioned by *Galen* in *Lib. 8. de Compos. Medicam. Cap. 3. Avicenna Lib. 4. Fen. 13. Tr. 5. C. 19*, and which consists of Collus, Saffron, Spikenard, Asarum, Matlich, Aloes,

and Opium. In Imitation of this Medicine are made the *Pilulæ Rondeletii*, the *Pilulæ Poterii*, the *Pilulæ Plateri*, the *Pilulæ Riverii*, the *Pilulæ Wildegansii*, the *Pilulæ Starkii*, and the *Pilulæ Anglicanæ*. In Asthmas, Chincoughs, Hiccups, and other painful and spasmodic Disorders, I with great Advantage use to mix the *Pilulæ Aloephanginæ*, or my *Pilulæ Polychrestæ*, with two or three Parts of the *Pilulæ de Stryace*, or de *Cynoglossæ*.

An Hiccup arising from a slight Cause is often happily stopt, without the Use of Medicines: When, for Instance, under a voluntary Motion of the Thorax, made on purpose, the Diaphragm is so press'd, that its moving Fibres are either more stretch'd or relax'd; the former is done by strong Inspiration, by Running, Jumping, or violent Riding; and the latter by strong Expiration, Vociferation, or by tying the Thorax with a Bandage, which is a simple, and often an instantaneous Remedy. Of the same Kind is Sternutation, which as (according to *Hippocrates*) it removes an Hiccup when spontaneous, so the Physician ought artfully to promote it for the same Purpose; and especially when either a viscid or flatulent Matter is lodged in the Coats or Corrugations of the Stomach, Sneezing is to be excited, in order to remove it by violent Expiration, during which the abdominal Viscera, and especially the Stomach, are strongly exagitated. But an artificial Sternutation is by no means to be produced, when an Inflammation, or a subtle Caustic and virulent Matter have deeply insinuated themselves into the nervous Parts.

As for Prevention, a due Use of the Non-naturals, and especially the avoiding a cold Air, is of great Importance. Those whose Solids are weakened by long Diseases, must preserve themselves against an Hiccup by the prudent Use of chalybeate Baths, and chalybeate Medicines, drinking at the same Time proper Liquors, and using due Exercise. *Frederic Hoffman.*

The Hiccup generally happens to the Aged after an immoderate Looseness, but principally after excessive Vomiting, and frequently prognosticates imminent Death. I ingenuously own, that I have not been able to satisfy myself in my Enquiry into the Cause of this Symptom; but I have frequently observed it to arise from some Disturbance raised in the Stomach, and adjacent Parts, by violent Medicines; not without great Danger to the Patient, because Nature is unable to check and quiet this Commotion; and, on this Account, I judged it proper to assist her by Art, by giving a large Dose, of no less than two Drams of *Dia-scordium*, which seldom failed to remove this Symptom, when the Seeds of Dill, and other celebrated Specifics had proved ineffectual. *Sydenham.*

The famous *Jalapium Meschatum* of *Fuller*, so much recommended as a Remedy for the Hiccup, is thus prepar'd.

Take of Damask Rose-water, six Ounces; of the Waters of Orange-flowers, one Ounce; of Barley Cinnamon-water, two Ounces; of Compound Piony-water, one Ounce and an half; of Musk and Ambergrease, triturated with one Grain of Salt of Hartshorn, each two Grains; of Saffron, cut and tied in a Bag, one Scruple; of the Oil of Cloves, one Drop; of the Confection of Alchermes, two Drams; and of the Syrup of Cloves, an Ounce and an half.

This Medicine is a temperate, but powerful Cordial, and highly beneficial in malignant Fevers, which convey deleterious Vapours to the Stomach, irritate the languid Spirits, produce Spasms, and an Hiccup. But notwithstanding its almost divine Energy, I have not always found it sufficient for subduing this last-mentioned Symptom. The Dose is five Spoonfuls every three Hours. *Fuller's Pharmacop.*

#### PRESAGES FROM HICCUPS

The Event of a Disease may be prognosticated from a Hiccup, though, indeed, it comes under the general Notion of Convulsions, being a Kind of Convulsion of the Stomach, as we are taught by *Galen* in his Comment on 5 *Apb. 3.* And the same Author, in his Comment on the Book of *Hippocrates de Rat. Vict. in Morb. Acut.* calls the Hiccup a convulsive Motion; and more expressly to the Purpose in his Commentary on the sixth Book of the *Aphorisms*, he tells us, "That though we may be allow'd to call a Hiccup a Convulsion of the Stomach, when we would describe its Nature, it would, perhaps, be better not to call it by that Name, but rather a Motion of the same Kind as Vomiting, only more intense and violent: For the Stomach, while it labours to expel its Contents, is excited to two Kinds of Motions, the most violent of which is a Hiccup; the other is Vomiting, in which latter it endeavours



## S I N

“endeavours to expel what is contained in the wide and open Capacity of the Stomach, but in the Hiccup only what molests the Mouth of that Part.” Hence it appears, that an Hiccough is an expulsive Motion of the Stomach, endeavouring to discharge itself of some offensive Matter. We may then very properly call a Hiccup a Convulsion of the Stomach, but of such a Kind of Motion as is observed in epileptic Patients, whose Brain is injured, or rather with *Galen Com. in Lib. de R. V. J. A.* a Sort of convulsive Motion. These Motions, according to *Hippocrates*, 6 *Aph.* 39. are excited either by a Repletion or Inanition of the nervous Parts, and particularly, of the Mouth of the Stomach. A Repletion happens from an Excess in Eating or Drinking, from a Redundance of Humours, a Phlegmon, or Flatulences. A Dryness or Inanition, is caused by a burning Heat, all immoderate Evacuations, Purgations, Watchings, Fastings, and the like. That a Hiccup is excited by the same Cause as a true Convulsion, we may infer from *Hippocrates*, where he speaks of a true Convulsion of the Stomach, proceeding from one or other of these Causes. A Hiccup often happens from a biting Sensation in the Mouth of the Stomach, which excites Motions that many justly enough call convulsive, and is occasioned by all such Things as either oppress the Stomach by their Redundance, or injure it by some offensive Quality. For when the Stomach is loaded with a Redundance of Humours, or Foods of bad Juices, or is vellicated by some acrimonious Matter, or distended with Flatulences, or irritated by Heat or Cold, or any other Quality, or suffers through Dryness, or is agitated in a Manner not unlike Convulsions, it endeavours to expel what offends it. To this Purpose we find *Galen* expressing himself, *Lib. 8. de Comp. Med. Cap. 8.* “Thus, he says, a Hiccup sometimes happens either from a Coldness or Repletion of the Stomach, or from a Vellication of acrimonious Humors, or such as are endued with some medicinal Quality.” And a little after, “a Hiccup may be occasioned by some acrimonious or serous Humours, or some Medicine vellicating the Stomach, which being expelled by Vomiting, the Hiccough immediately ceases.” Many after taking the Medicine composed of the three Species of Pepper, and drinking Wine immediately upon it, are molested with a Hiccup, of which Number I myself am one; and every Body knows that some Persons are subject to be taken with a Hiccup after Foods of a stimulating Quality, which, upon vomiting, immediately ceases; sometimes a Hiccup is occasioned by a Rigor of the Mouth of the Stomach. Children are very subject to the Hiccup, from a Corruption of the Aliment in the Stomach, and from a Coldness of the Part. Hiccups in Fevers are sometimes occasioned by a dangerous Inflammation of the Stomach, Brain, small Intestine, or Liver, from a Compression of the Mouth of the Stomach, from a Tumefaction of the concave Part of the Liver, a Communication of the burning Heat of that Part, or the Flux of an acrimonious Humour from the inflamed Part upon the Mouth of the Stomach and vellicating it, or some acrid Exhalation irritating the same. But let this suffice for the Causes of a Hiccup and let us now consider the Prognostics which may be drawn from it.

A Hiccup then is only not to be dreaded, when it happens without a Fever, or any other Disease, and is occasioned by Wine, or Foods, or even by some acrimonious, cold, hot, or corrupted cold or hot Humour. In Fevers they are always dangerous, as well as Convulsions, and most of all when succeeded by a Fever. Some Fevers are called Singultuous, because the Patient is almost continually molested with the Hiccup, which increases and remits with the Fever, which, for that Reason, is called by the Greeks *σινγυλτικός*, *Lingodes* [from *λινγξ*, the Hiccup], mentioned by *Hippocrates*, *de R. V. J. A.* And *Galen*, in his Comment thereon tells us, that a Fever takes the Name of Singultuous from the Hiccup, which continually attends it, and is exasperated, together with the Disease, through the whole Stage of the Disorder; but Hiccups are most to be dreaded when they proceed from an Inflammation of the Stomach, small Intestine, or Liver. *Celsus* tells us, that a frequent Hiccup indicates an Inflammation of the Liver; a Hiccup, however, does not simply proceed from an Inflammation of the Liver, but from an extraordinary Inflammation of that Part, as *Galen* observes, in his Comment on 5 *Aph.* 3. tho’ *Hippocrates*, in that Aphorism, says absolutely, “That the Hiccup succeeds an Inflammation of the Liver.” The Hiccup then, under an Inflammation of the Liver, is generally mortal, and the same is true of an Inflammation of the Brain or Stomach, and especially when it comes after vomiting, to which Purpose *Hippocrates*, 7 *Aph.* 3. says, that after Vomiting, the Hiccup and Redness of the Eyes are bad Signs. *Galen* says of the Hiccup, that it is the same Disorder with respect to the Stomach, that a Convulsion is to

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the Muscles, and that sometimes it affects the whole Stomach, sometimes its Mouth, and the Oesophagus, which are molested with Humours; and if these can be discharged by Vomiting, the Patient is immediately freed from the Hiccup; but if this has no Effect, it shews either that the Brain, the Original of the Nerves, or the Stomach, labour under a considerable Inflammation. A Hiccup, therefore, which comes after vomiting, is generally pernicious, and most of all in the Iliac Passion, according to that of *Hippocrates*, 7 *Aph.* 10. “The Ileus, succeeded by Vomiting, Hiccup, or Convulsion, is of bad Prognostication.” And *Galen*, in his Comment thereon, says, that the Patients, in that Disorder, do not always vomit, but only when it proves mortal, and if they are vehemently affected, the Excrements ascend, and a Hiccup is excited. In acute Fevers, then a Hiccup succeeding Vomiting, and especially that of a bad Kind, is to be esteemed mortal. An Instance of this we find in *Hippocrates*, 3. *Epid.* of a Woman, who, on the twelfth Day of her Illness, vomited much black, fetid Matter, and was extremely molested with the Hiccup and a Thirst, and died the next Day. We may well then venture to pronounce all Hiccups, especially if frequent and troublesome, in acute Fevers, mortal, and most of all, if consequent upon a bad Kind of Vomiting, I mean that wherein fetid, black, virulent, or sincere Humours are discharged; justly, therefore, in *Coac.* is a Hiccup condemned, which follows a Vomiting of sincere Matters. An Hiccup, consequent upon immoderate Evacuations, or Purgations, is generally mortal, as proceeding from a Vellication of the nervous Parts of the Stomach, occasioned through Dryness. Hence *Hippocrates*, 5 *Aph.* 3. pronounces a Hiccup or Convulsion, succeeding a copious Hæmorrhage, a bad Sign; and in the following Aphorism he says, that the same Symptoms supervening upon an immoderate Purgation, are bad Prognostics. The most fatal of all Hiccups, is what is consequent upon an immoderate Purgation, where the Body is naturally weak; agreeably to these of *Hippocrates*, 7 *Aph.* 41. where we are told, that a Hiccup coming after an immoderate Purgation, is no good Sign; and the like may be said of a Hiccup, excited by a Tumor or Inflammation of the Liver under the Jaundice, according to that in *Coac.* 470. where it is said, “They who are affected with the Jaundice, and a Hebetude of the Senses, if a Hiccup supervene, fall into a Looseness, or perhaps labour under a Constipation of the Belly, and become of a greenish yellow Aspect.” A Hiccup is not consequent upon every Affection of the Liver, but when that Part is highly inflamed, or the whole Stomach is oppressed or irritated by a Redundance of Bile, or labours under a violent Inflammation, the Hiccup is exasperated to a high Degree. To confirm, however, our Predictions of the fatal Event of a Hiccup, we ought to take into our Consideration other pernicious Signs, both preceeding and consequent to that Disorder, which is never mortal, but in Conjunction with other destructive Symptoms, appearing either before, or attendant upon it. To this Purpose we are told by the Author of the *Prorrhetica*, “That an Aphony, attended with Hiccups, is a very bad Sign;” and *Coac. Præfag.* “That a Lassitude, with a Hiccup and a Stupor, portend a bad Event. Other very bad concomitant Signs, are cold Sweat, an invincible Coldness of the extreme Parts in a burning Fever, no Thirst, a Loathing of Food, copious Sweats, without an Intermission of the Fever, Blood falling by Drops from the Nose, with many other Signs of the like Nature, which you will find mentioned in the History of the Woman who lay ill in Childbed, 3 *Epid. Sect. 2. Ægr. 12. Prosper Alpinus de Præfag. Vit. & Mort.*

*Euriximachus*, according to *Plato*, says, there are three Ways of curing the Hiccough; to hold ones Breath some time; to wash the Throat with Water; and to sneeze.

*Alexander Trallian* says, That any Surprise, or Intenseness of Thought (as counting of Money) will immediately remove a Hiccup.

SINOPICA RUBRICA. See RUBRICA SINOPICA.

SINOPIS. The same as RUBRICA SINOPICA.

SINUS. In Anatomy, the *Pagina* is called the *Sinus Muhebris*, or *Sinus Pudoris*; and certain Cavities in the *Dura Mater*, are called the *Sinuses* of the *Dura Mater*. See CAPUT. A Sinus of a Bone, is a Cavity which receives the Head of another Bone. In Surgery, a *Sinus* is a Collection of Matter, with a small Office for the Discharge thereof.

SION. See SIUM.

SJOUANNA *Amelipodi*, H. M. *Frutex Indicus pentapetalos Gemina Baccæ, Calycer, excepta*. It is an umbelliferous and bacciferous Shrub, growing in the *East Indies*. The Fruit comes forth in the lower Branches, while the upper ones are adorned with Buds and Flowers, and the whole Umbella, with its Buds, Flowers and Fruit seen altogether, afford a most pleasant Sight.

The



The Virtues are only in the Root, which is effectual against the Poison of Serpents and Scorpions. *Raii Hist. Plant.*

SIPHAC. The *Peritonæum*.

SIPHILIS. The Pox.

SIPHITA PARVA, in *Paracelsus*, is the *Chorea Sancti Viti*, St. Vitus's Dance. *Siphita Stricta*, in the same Author, is Walking in the Sleep.

SIRA. Orpiment. *Rulandus*.

SIRACOSTUM, or ALSIRACOSTUM. The Name of a Medicine, recommended by *Mesue*, in acute Fevers.

SIRÆUM. *siguon*. The same as SAPA, or any sweet Decoction.

SIRENES. See DRACUNCULI.

SIRIASIS. The Name of a Distemper to which Children are subject, which consists in an Inflammation of the Brain, and its Membranes, attended with a Depressure of the *Fontanella*; a Cavity of the Eyes; a burning Fever; a Paleness, and Dryness of the whole Body; and an utter Prostration of Appetite. *Castellus*.

SIRICON DE PLUMBO, is explained by *Rulandus*, *Cinis Plumbi*.

SIRINGA. Calx. *Rulandus*.

SIRONES. The same as SIRENES.

SIRYPUS. See SYRUPUS.

SIRSEN. A *Phrenitis*.

SIRZA. An Eschar. *Rulandus*.

SJSARUM.

The Characters are;

The Roots are like the *Napus*, and hang in great Numbers to one Head. The Leaves are pinnated, grow to a Rib, and end in an odd Lobe; the Seeds are narrow and striated.

*Boerhaave* mentions but one Sort of *Sisarum*; which is,

*Sisarum Germanicum*. C. B. P. 155. *Tourn. Inst.* 309. *Boerb. Ind. A.* 54. *Sifer*. Offic. *Sifer vulgare*, Park. Theat. 945. *Sisarum* *Raii Hist.* 1. 442. Ger. 871. Emac. 1026. Park. Parad. 506. *Sisarum multis*, J. B. 3. 153. SKIRRET.

The Root of the Skirret is branched into many long, glandulous Parts, of a whitish Colour, and a pleasant sweet Taste when boiled. The Stalk arises to be three or four Foot high, thick, and channelled; clothed with long pinnated Leaves, composed of three or five long, sharp-pointed Pinnæ, serrated about the Edges, two opposite, the odd one at the End, being roundest and largest. The Flowers grow in Umbels, being small and five-leaved. The Seed is somewhat like Parsley-Seed, but larger. It is planted in Gardens, and flowers in *June*.

The Roots only are used, and that but seldom in the Shops, being eaten at the Table like Parsneps, which they excell in Sweetness of Taste, though somewhat windy. They are accounted nourishing and provocative, are diuretic and good for the Stone. *Miller's Bot. Off.*

The Root is of culinary rather than officinal Use, and is of a bitterish and somewhat astringent Taste. It is good for the Stomach, excites an Appetite, is diuretic and lithontriptic; affords good Nourishment, is easy of Digestion, and esteemed a specific Antidote against Quicksilver. *Dale from Schroder.*

*Cordus* takes it to be the wholesomest of all esculent Roots. *Dodonæus* says they are moderately hot and moist; are easy of Digestion, and not slow of Passage; are moderately nutritive, and of no bad Juice: It is, however, flatulent, whence it provokes Lust. *Raii Hist. Plant.*

Scarcely any Root has a sweeter Taste than that of a Skirret; and *Pliny* tells us, that the Emperor *Tiberius* exacted it of the *Germans* by way of Tribute. It is of excellent Virtues, and very proper for those who spit Blood or make bloody Urine, if they confine themselves to eat no other Root but this boiled in Milk, Whey, or Flesh-Broth; for by such means they would procure a due Laxness of the Belly, and a Removal of the Disorder. It is recommended, also, for the Strangury and Tenesmus, and is esteemed a very good Remedy against a Dysentery and Fluxes of the Belly. The Root boiled as aforesaid, then bruised, and taken in the Morning before the Patient rises, is very good in a Phthisis, or great Extenuation of the Body; as it is, also, in all pectoral Disorders. *Hist. Plant. Acript. Boerhaave.*

SISARUM SYRIACUM. A Name for the *Tordylium*; *Orientalis Secacul Arabum dictum Ramulifio*.

SISFR. The same as SISARUM.

SISON. A Name for the *Sium*; aromaticum; *Sison* *Officinarum*. See AMOMUM.

SISYMBRIUM.

The Characters are;

It has a thin Pod, the Valves not bursting, nor wreathed into a spiral Form, nor forcibly discharging the Seeds; it has also a singular Appearance, the Leaves being jagged or cut into Pinnæ.

*Boerhaave* mentions thirteen Sorts of *Sisymbrium*, which are,

1. *Sisymbrium*; *Pyrenaicum*; *latifolium*; *purpurascens* flore. T. 226. *Nasturtium Pyrenaicum, aquaticum*, Pon. Bat.

2. *Sisymbrium*; *aquaticum*. *Tourn. Inst.* 226. *Boerb. Ind. A.* 2. 15. *Nasturtium aquaticum*, Offic. *Nasturtium aquaticum vulgare*, Park. Theat. 1239. *Raii Hist.* 1. 816. *Nasturtium aquaticum supinum*, C. B. P. 104. *Nasturtium aquaticum sive Cratevæ Sium*, Ger. Emac. 257. *Sisymbrium Cardamine, sive Nasturtium aquaticum*, J. B. 2. 884. *Raii Synop.* 3. 300. WATER CRESSES.

The Roots of Water-Cresses consist of a great Number of white Strings, fixed in the Earth under the Water, from which arise many pinnated Leaves, of six Pair of blunt-pointed long Pinnæ, with an odd one at the End, larger than the rest, a little waved about the Edges, many times of a dull green Colour. The Stalk grows to be about a Foot high, hollow and channelled, having smaller Leaves growing at the Joints. The Flowers grow in Tufts of small four-leaved white Flowers, flowering gradually, so that the Stalk, with the Seed-Vessels, run up into a long Spike. They are round and slender, full of very small red Seed. It grows in Ditches and Rills of Water, and flowers in *June*. The Leaves are only used.

They consist of fine volatile Parts, and are warming and opening, and of great Service against the Scurvy, and all its Symptoms, being one of the Plants whose Juice, mixed with that of Scurvy-Grass, and other Herbs of the like Nature, is given against all scorbutic Affections. They are, likewise, good for the Stone, Gravel, Dropsy and Jaundice, and are frequently eaten as Salad in the Spring. *Miller's Bot. Off.*

This Plant is acrid, and gives no Tincture of red to the blue Paper. It contains a Salt pretty much resembling the *Oxyfal Diaphoreticum Angeli Salæ*, which is an alkaline Salt, over saturated with Acid. Besides this Plant, there is in the Water-Cresses a little Sal Ammoniac and Sulphur, and a great deal of Earth. For,

By the Chymical Analysis we obtain from this Plant a great deal of Acid and Alkali, a little urinous Spirit and Sulphur, and a pretty deal of Earth. It is aperitive, diuretic, and antiscorbutic. They boil a Handful of it in lean Broth of Cray-Fish Soup. These Broths purify the Blood, and very much relieve those that are dropsical, scorbutic, or hypochondriac. The Juice, Extract, and urinous Spirit of this Plant have the same Virtues. They affirm that this Juice takes away the Polypus of the Nose, and makes it fall off, if it be often washed with it. *Marlyn's Tournesfort.*

3. *Sisymbrium*; *Orientalis*; *facie Barbareæ*; folio *Plantagini*. T. Cor. 16.

4. *Sisymbrium*; *Erucæ folio glabro*; flore luteo. See BARBAREA.

5. *Sisymbrium*; *Erucæ folio glabro*; minus; & præcoctus. T. 226. *Eruca, latifolia, lutea, seu Barbarea minor*. M. H. 2. 230.

6. *Sisymbrium*; *Erucæ folio glabro*; minus; folio elegantior variegati.

7. *Sisymbrium*; *aquaticum*; *Raphani folio*; siliqua brevior. T. 226. *Raphanus aquaticus, alter*. C. B. P. Edit. 1. 97. Prodr. 38. *Rapistrum aquaticum*, Tab. Ic. 408.

8. *Sisymbrium*; *aquaticum*; foliis in profundas lacinias divisis; siliqua breviori. *Tourn. Inst.* 226. *Boerb. Ind. A.* 2. 16. *Raphanus aquaticus*, Offic. *Raii Hist.* 1. 818. Ger. 187. Emac. 240. Park. Theat. 1228. *Raphanus aquaticus foliis in profundas lacinias divisis*, C. B. P. 97. Prodr. 3. 8. *Raii Synop.* 3. 301. *Raphanus aquaticus Tabernæmontani*. J. B. 857. *Armoracia foliis laciniatis*, Volck. WATER-RADDISH.

It grows in marshy Ditches, and flowers in *June* and *July*. It is supposed by some to agree in Virtues with the Horseraddish.

9. *Sisymbrium*; *palustre*; *repens*; folio *nasturtii*. T. 226. *Eruca palustris, & nasturtii folio, siliquâ oblongâ*. C. B. P. 98.

10. *Sisymbrium*; *annuum*; folio *absinthii minoris*. *Tourn. Inst.* 226. *Boerb. Ind. A.* 2. 16. *Sophia Chiragogorum*, Offic. Ger. 910. Emac. 1068. Park. Theat. 830. *Erysimum Sophia dictum*, *Raii Hist.* 1. 812. *Synop.* 3. 298. *Nasturtium sylvestre tenuissimè divisum*, C. B. P. 105. *Scripsum Germanicum sive Sophia quibusdam*, J. B. 2. 886. *Accipitrina Rivini & Lonicæ*, Rup. Flor. Jen. 64. *Thalictum Dodonæi*, Lugd. 1146. *Cardamine sylvestris tenuissimè divisis foliis*. H. Montp. FLIX-WEED.

Flixweed has a white, hard, woody Root, full of small Fibres at the Bottom, perishing after having ripened Seed. The Stalks arise to be about two Foot high, more or less, beset with many long, winged, and very finely and neatly divided green Leaves, pretty much resembling those of the true Roman Wormwood, beset with very short fine Hairs. The Flowers grow at the End of the Branches, being small, yellow,



low, and four-leaved, and are succeeded by very slender Seed-Vessels, about an Inch or thereabouts in Length, full of very small reddish Seed. It grows frequently in sandy Ground, and amongst rubbish, and flowers in *June*.

The Seed is the only Part used; and 'tis said, that the Decoction of it unbruised is a certain Remedy for the bloody Flux; but it will not have the same Effect, if the Seed be bruised. It is, likewise, commended for the Stone and Gravel. *Miller's Bot. Off.*

It has a Taste a little astringent, but acrid, and something like that of Mustard. It gives a faint red Colour to the blue Paper. The Sal Ammoniac predominates in this Plant, being mixed with a great deal of Sulphur and terrestrial Parts; so that it is vulnerary, deterfive and febrifugous.

*Cæsalpinus* says, that its Seed kills Worms. *Tragus* allows that it stops the Dysentery, and all Sorts of Fluxes. They give a Dram of it in Pottage or Wine for a Looseness. The Water in which the Plant has been macerated cold, has the same Virtues. The Juice, Conserve, or Extract of the Leaves and Flowers, are good for spitting Blood, the *Fluor Albus*, and immoderate Fluxes of the Piles and Terms. Externally applied, it cures Wounds, and cleanses Ulcers. They sell the Seed at *Paris* under the Name of *Talitron*, which comes from *Thaliætrum*; for *Dodonæus* has given it that Name. *Martyn's Tournefort.*

11. *Sisymbrium*; annum; folio absinthii minoris latiore. *Nasturtium sylvestre, tenuissimè divisum, folio latiore.* C. B. P. Var. 105.

12. *Sisymbrium*; minus; *Erucæ* folio glabro, nigro, crasso, lucido. *Barbarea, minor, nigro, crasso, lucido, folio.*

13. *Sisymbrium*; palustre; minus; siliquâ asperâ. T. 226. *Sinapi parvum, siliquâ asperâ,* C. B. P. 99. Prodr. 41. *Erysimum annum, minus, siliquâ asperâ.* Vaill. *Boerb. Ind. Alt. Plant.*

The second Species is a medicinal Plant, and has the Smell and Taste of *Eruca*, or Rocket, accompanied with a Bitterness universally grateful; whence it is of Use in those scorbutic Affections in which Cochlearia and Nasturtium are proper, for which Purposes it is used in Sallads. It cures all Diseases proceeding from a Viscidity and Ropiness of Blood. The Juice taken in the Morning for Months together, is an excellent Remedy for scorbutic Ulcers. It has the Virtues of the Cochlearia, tho' a much less Root, and, also, the Taste of that Plant, but is less acrimonious, and has very salutary Qualities, (especially the seventh Species) which have been observed before of the *Erysimum* and *Eruca*. The tenth is the most effectual of them all, in deterring malignant Ulcers, and depurating sanious ones, and for consolidating them, especially if used internally as well as externally. Hence it has the Title of *Chirurgorum Sapientia*, for it is of a saponaceous as well as astringent Quality; and being applied to a Wound, conglutinates it without a Suppuration: It, also, provokes Urine, and is of Service in the Stone and Dropsy. *Hist. Plant. Ascript. Boerhaave.*

**SISYRRHINCHIUM.** Offic. *Sisyrrhinchium Theophrasti*, Raii Hist. 2. 1167. *Sisyrrhinchium minus angustifolium*, C. B. P. 41. *Crocus Italicus parvo flore, radice rostratâ*, Elem. Bot. 290. *Bulbocodium Crocifolium flore parvo, violaceo*, Tourn. Coroll. 50. **SPANISH-NUT.**

It grows in the Kingdoms of *Valencia* and *Murcia* in *Spain*, and flowers in *March*. The Root is said by the Inhabitants, where it is a Native, to be good for the Gripes; but the Body must be exercised with Dancing after taking it.

**SITANIUS.** The same as **SENIOS**.

**SITIOLOGICE.** That Part of Medicine which treats of Aliments; from *σίτος*, Aliment, and *λέγω*, to speak.

**SITION.** *σίσιον*. Aliment in general; or Bread made of Wheat in particular.

**SITIS.** Thirst. This is excited either by a Defect of a due Quantity of Moisture in the Body; from a Thickness and Immeability of the Humours; from a redundant Heat; from a muriatic, ammoniacal, alkaline, aromatic, oleous and rancid Acrimony; or from Poisons.

It is worthy of Remark, that Thirst seems to be a kind of Instinct, which directs a Person to drink Fluids, at the same time when the State of his Body requires Dilution. Thus after Eating, a Thirst is excited, as a sort of Notice, that the Food wants something to dilute it. When the Humours of the Body are thick, viscid, and unfit for Circulation, Thirst gives a sort of Warning of the Condition of the Fluids, and a Persuasive to mend their Defects, by diluting them, and rendering them more thin, and fit for their due Distribution.

In feverish Disorders, Thirst seldom fails of putting the Patient in Mind, that it is necessary to temperate his Heat by aqueous and acescent Liquors. In like manner, if any kind of Acrimony is offensive in any Part of the Body, Thirst gives notice of the Danger, and indicates the Remedy.

I am sensible, that the Thirst generally observed in Dropsies, may be esteemed a false Guide, and a Persuasive to drink, at a time that it is pernicious; but it must be considered, that the stagnating Waters in this Distemper putrify and contract an Acrimony, which is well corrected by drinking proper Liquors in due Quantities.

A Thirst arising from a Dryness of the whole Body is allayed by the liberal and long-continued drinking of warm, aqueous, and farinaceous Liquors, rendered grateful by the Admixture of a small Quantity of some proper Acid. Thin Decoctions of Barley, Oats, and Bread; Whey, Milk, and Water, Posset-Drink, and a thin unsalted Decoction of Veal, without its Fat, are beneficial. Among fermented Liquors, small Beer, though not that Kind impregnated with Aromatics, is serviceable. Baths, Fomentations, and Clysters, are, also, useful in this Case.

A Thirst arising from a Dryness of particular Parts, such as the Mouth, the Tongue, the Fauces, or Oesophagus, is allayed:

1mo. By the Use of the Things above recommended.

2do. By often washing and gargarising the Mouth with the same Things.

3tio. By opening the salival Glands and Ducts, by means of Epithems and Fomentations, consisting of laxative, moistening and aperient Ingredients. In this Case, Oxycerate with Crums of Bread is of singular Use.

A Thirst arising from an acrid lixivial Salt, or from an acrid aromatic Salt, is removed by the Things already mentioned, as being of a diluting Nature; but especially if acid and nitrous Substances are mixed with them. Hence we know how a Thirst, arising from a muriatic Salt, is to be allayed, since it only calls for aqueous Liquors.

But a Thirst arising from a Matter unfit for passing thro' the Vessels, is only to be removed by diluting and resolvent Liquors. *Boerhaav. Institut.*

**SITOS.** *σίτος*. Wheat, or any fumentaceous Grain, of which Bread is made; or Bread. In *Hippocrates* it frequently imports solid Aliment, in Contra-distinction from forbile Aliment; or Aliment in general; and sometimes the Recrements of the Aliment contained in the intestinal Tube.

**SITOSPELTUM.** *σιτόσπλιτον*. A Name for the *ÆGYLOPS*, a Species of Grass. *Goræus.*

**SITTA.** *σίττα*. The Name of a Bird, a Species of *Pyr.*

**SIUM.**

The Characters are;

The Root is like that of a Colewort, fibrous and ligneous. The Leaves are pinnated, growing by Pairs to one Rib, and ending in an odd one. The Petals of the Flowers are bifid; and the Seeds are roundish, gibbous and striated.

*Boerhaave* mentions six Sorts of *Sium*, which are;

1. *Sium*; latifolium. C. B. P. 154. *Tourn. Inst.* 308. *Boerb. Ind. A.* 55. *Sium*, Offic. *Sium majus*, Ger. 200. *Sium majus latifolium*, Ger. Emac. 256. Raii Hist. 1. 443. *Sium maximum latifolium*, J. B. 3. 175. *Sium Dioscoridis sive Pastinaca aquatica major*, Park. Theat. 1240. *Sium latifolium foliis variis*, Raii Synop. 3. 211. **WATER-PARSNEP.**

It grows in Rivers and marshy Places, flowering in *July*. The Leaves eaten either crude, or boiled, are said to break and expel the Stone; to excite Urine and the Menstrues; to promote the Expulsion of the Fœtus; and to be good in a Dysentery. *Dioscorides*, L. 2. C. 154.

2. *Sium*; *Erucæ* folio. C. B. P. 154. *Sium aquaticum, rugosis foliis, multifidis, trifidis, & dentatis.* M. U. 12. Ic. T. 5. *Sium aquaticum, foliis multifidis, longis & serratis.* M. H. 3. 283. *Sium alterum*, Dod. p. 589. *Cicuta, aquatica, Gesneri.* J. B. 3. 175. *Cicuta maxima*, H. Eyll. Vern. O. 7. F. 2. Fig. 2. *Herba venenosa*, Lob.

Our *Oenanthe Cicutæ facie, succo viroso*, which *Wepfer* has described by the Name of *Cicuta Aquatica*, and of the dismal Effects of which in some Children, who by Mistake eat of it, he has wrote a large Treatise, was very probably the *Cicuta* so much in use of old, especially at *Athens*, for Killing. At least the Violence of this makes it a much sifter Instrument of Death than the common Hemlock, which is not by far so malignant a Quality.

Though we must withal allow differing Climates very considerably to heighten or abate the Virtues of Plants. And it is not altogether improbable, that the Poison with which the *Athenians* took away the Lives of Malefactors, was an inspissated Juice compounded of that of *Cicuta* and other corrosive Herbs.

But be this as it will, the Alterations which *Wepfer* observed the Roots of *Oenanthe* to make in the Body, were a violent Pain and Heat in the Stomach, terrible Convulsions, with the Loss of all the Senses, Distortion of the Eyes, and flowing of the Blood out of the Ears, the Mouth so fast shut that no Art could open it, Efforts to vomit, but nothing thrown



thrown up, frequent Hiccups, with a great Distension and Swelling, especially at the Pit of the Stomach; and when Death had concluded the Tragedy, a continued Running of green Froth at the Mouth.

*Stalpart Vander Wiel* gives the like Account of two Persons killed at the *Hague* by the same Roots.

In a Dog, who, for Experiment's sake, died by this Poison, the Stomach, when opened, was found quite constringed, and shut up at both Orifices, its inward Surface red, with livid Spots here and there; the Intestines were empty; only the Rectum contained a little greenish Mucus.

Thus it appears that this Plant consists of hot, acrid, and corrosive Parts, which by rarifying the Juices of the Stomach, and wounding its nervous Membranes, are the Cause of all those Disorders which immediately follow.

For upon the Sense of a violent Irritation and Pain, the Fluid of the Nerves is presently in large Quantities determined to the Part affected; and this, if the Stimulus be not over-great, will be only to such a degree as is sufficient, by contracting the Fibres of the Stomach and Muscles of the Abdomen, to throw off the Cause of the disagreeable Sensation; but the uneasy Twitching being too terrible to be borne, the Mind, by a kind of Surprise, with Haste and Fury, as it were, commands the Spirits thither; thus the Business is overdone, and the Action of the Fibres becomes so strong, that the Orifices of the Stomach are quite closed; so that instead of discharging the noxious Matter, the Torment is made greater, and the whole Oeconomy put into Confusion.

This forcible Contraction of the Muscles was the Reason that one of the Children which *Wepfer* saw, made Urine in the Midst of the Agony, to the Height of five or six Foot, with a Strength and Violence surprising to the Spectators.

Nor is it any Wonder, if in these Circumstances all Sense be lost, Blood gush out at the Ears, Nostrils, &c. the Parts being all torn and broke by the Violence of the Convulsions, which though they began in the Muscles of the Belly, must at last prevail in the Members too, till the whole Fabric is shocked and overturned, and some of the corrosive Salts, perhaps getting into the Blood, and by the Rarefaction of it distending the Vessels, the membranous Coats of which being already over-stretched, will the more easily give way and let out their Fluid.

The Case of *Aconitum* is much the same; this is our *Napellus* or *Manks-hood*; and its Effects so nearly agree with those now related of *Oenanthe*, that I shall not need to recite them; the Experiments of *Wepfer* are full and convincing. And indeed as all the Histories which this same Author has so carefully given us of Trials made with several vegetable Poisons, *Solanum*, *Nux Vomica*, *Cocculus Indicus*, and the like, on different Creatures, put it out of all doubt that the common Mischief of these is a Twitching and Inflammation of the Stomach; so it appears from hence that virulent Plants, although they may be distinguished even from one another by particular Virtues, do, however, kill by a like Operation and Force, which differs principally in Degree from that of noxious Minerals.

And therefore, in order to know what the specific Qualities of any such Herbs are, they must be given only in very small Doses; and then perhaps it would appear, that they are not made (as some imagine) to be deliterious and destructive, but for very good and beneficial Uses; as we particularly experience in the Case of Opium.

Nor is it at all strange that the Symptoms from a vegetable, and from a mineral Virulency, should be so different, although of the same Kind, and only of unequal Force; for the more solid Parts of Minerals, eroding the Coats of the Stomach, induce a perfect Mortification and Gangrene; and thus do their Work at once; whereas the weaker Salts of Plants can make but a slighter Excoriation, upon the painful Sense of which those Agonies and Convulsions that follow, rather gradually exhaust the Strength; and thus the Animal is not killed so speedily, nor with the same Appearances.

Upon this Score, tho' mineral Poisons do not pass the *Prima Via*, vegetable ones in some Cases possibly may; just as we find those Medicines which have a great Degree of Irritation presently to induce a Vomiting; whereas the same Twitching, a little weakened, suffers them to pass into the Intestines, and work downwards by Stools.

By this we may, perhaps, give some guess at the Nature of those Poisons, with which they tell us the Natives in some Parts of *Africa* and *India* are so expert at Killing, that they can do it in a longer or shorter time as they please. These are most probably either the Fruits or the inspissated Juices of corrosive Plants, which inflaming the Bowels, may cause little Ulcers there, whose fatal Consequences, we know, may very well be slow and lingering.

This I am the rather induced to believe, because an ingenious Surgeon, who lived in *Guinea*, told me, that the Anti-

dote by which the Negroes would sometimes cure those who were poisoned, was the Leaf of an Herb, which purged both upwards and downwards. For by these means the Stomach might be cleared from the adhering corrosive Parts of the Venom. Yet I can hardly think it possible at the same time, that they should be able, by varying the Composition or Quantity of the Dose, to ascertain the Time in which it will kill, to a Week, Month, and the like; nor indeed have I ever met with any Person who could attest this to be Matter of Fact. Though repeated Trials and Observations may help one well practised in such Tricks to give notable Conjectures in this Point.

The Ancients, indeed, pretended much the same thing with their *Aconitum*, of which they seem to have made a kind of Secret and Mystery, as we learn from *Theophrastus*, who says, *the ordering of this Poison was different, according as it was designed to kill in two, three Months, or a Year*. But this he relates only as a common Tale or Opinion, and not as a Story to which he himself gave any manner of Credit.

It is very plain, that the common Cure of all Poisons of this kind, must be by freeing the Stomach, as soon as possible, from the corrosive vellicating Particles, and defending the Membranes from their Acrimony, by such Things as are of a smooth, oily, and lubricating Substance. *Mead on Poisons*.

3. Sium; five *Apium palustre*; foliis oblongis. See *BERULA*.

4. Sium; medium; ad alas floridum. *M. U.* 63. *Apium, palustre, minus cauliculis procumbentibus, ad alas floridum.* *H. L.*

5. Sium; arvense five segetum. *Tourn. Inst.* 308. *Raii Synop.* 3. 211. *Boerb. Ind. A.* 55. *Selinum segetale*, *Offic. Park. Theat.* 932. *Selinum Sii foliis*, *Ger. Emac.* 1018. *Raii Hist.* 1. 443. **HONE-WORT.**

This Plant grows amongst Corn in moist Soils. The expressed Juice mixed with Ale, and taken every Morning fasting, is said to cure Tumors of the Cheeks. The Juice of one Handful of the Herb, is to be taken in half a Pint of Ale. *Raii Hist. Plant.*

6. Sium; aromaticum; Sison Officinarum. See *AMOMUM*.

*Boerhaave* says, that notwithstanding the Virtues ascribed to the first Species, he never durst use it, on account of the Resemblance it bears to the second Species, which is the famous *Cicuta Aquatica*, of which *Wepfer* wrote an entire Treatise. This second Species has a thick bulbous Root, of a sweet Taste, but is one of the greatest Poisons known; for if taken into the Stomach, it excites horrid Convulsions, which soon prove mortal, unless discharged from the Stomach by Vomit. The Method of Cure is, to pour down large Quantities of warm Oil, with Water, and a little Honey, and by this means to excite Vomiting, that the Poison may be discharged from the Stomach. Under the Article *CICUTA*, I have referred the *Cicuta Aquatica* by Mistake to *PHELLEDRIUM*.

**SMALTUM.** Smalt. This is a chymical Preparation of a blue Colour, used by Painters and Enamellers, but of no Use in Medicine. It is commonly called Stone, or *Powder Blue*. It is made of *Cobalt*, Pot-ash, and Powder of Flint-Stones. The Manner of preparing it is described in the *Philosophical Transactions*, by *Dr. Krieg*, and by *Joh. Henry Linck* of *Leipsie*, in the same Work.

**SMARAGDINUM EMPLASTRUM.** The Name of a Plaster described by *Celsus*, *L. 5. C.* 19.

**SMARAGDUS.** *Offic. Boet.* 195. *Calc. Mus.* 212. *Geoff. Prælect.* 80. *Schrod.* 331. *Kentm.* 47. *De Lact.* 33. *Aldrov. Mus. Metall.* 973. *Chault. Foss.* 38. *Smaragdus à nomnullis Prasimus*, *Worm.* 105. *Mont. Exot.* 14. **THE SMARAGD OR EMERALD.**

The Emerald is a green, diaphanous, shining Gem, very pleasant to the Sight, but excessively brittle, which has given occasion to many Stories. It is divided into Oriental and Occidental. The Oriental is the best in all Respects. The other, which comes from *Peru*, is not near so bright, and besides, has generally some foul Spots. There is a third kind of Emerald, or *Pseudo-Smaragdus*, found in the Mountains of *Switzerland* and *Auvergne*, which is extremely tender, and of the palest Green.

Fragments of Emerald thrown upon a clear Fire, emit a fine Flame, and totally lose their Colour, which is a Proof sufficient that this Gem contains some Sulphur or Copper. Besides the superstitious Uses ascribed to it, it is said to stop Fluxes of all kinds. It makes Part of the *Elixirarium de Gemmis*, and *Confectio de Hyacintho*, together with the other precious Fragments. *Graffroy*.

**SMARIS.** *Offic. Rondel. de Pisc.* 1. 140. *Bellon. de Aquat.* 225. *Cesin. de Aquat.* 522. *Aldrov. de Pisc.* 227.



Raii Ichth. 319. Ejuld. Synop. Pisc. 136. Jonf. de Pisc. 55. Charlt. Pisc. 36. **THE WHITE CACKEREL.**

This is a Fish found in the *Mediterranean Sea*. The Head of this Fish salted and burnt, is said to repress the tumid Lips of Ulcers; to restrain phagedænic Ulcers; and consume Corns, and those Excrescences called *Thymi*. The salted Flesh is said to be a good Application in Case of the Sting of a Scorpion, or the Bite of a mad Dog.

**SMECTIS.** *σμηκτίς*. A Name for the *CIMOLIA TERRA*.

**SMEGMA.** *σμήγμα*. Soap.

**SMELE.** *σμήλη*. This is explained by *Gorræus*, a dry Powder of any kind sprinkled upon the Skin, with a View of deterging or cleaning it.

**SMERILLUS.** The same as *SMYRIS*.

**SMILAX.**

The Characters are;

It has the Appearance of a scandent Plant, with Claspers, or Tendrels. The Stalks are spinous, and the Flowers poly-petalous and rosaceous. The Berry is soft, roundish, and full of an oval Seed.

*Boerhaave* mentions four Sorts of *Smilax*, which are:

1. *Smilax aspera*; fructu rubente. *C. B. P.* 296. *Tourn. Inst.* 564. *Boerb. Ind. A.* 2. 60. *Smilax aspera*, Offic. Ger. 709. *Emac.* 859. *J. B.* 2. 115. *Smilax aspera fructu rubro*, Park. Theat. 173. Raii Hist. 1. 655. **ROUGH BIND-WEED.**

This Plant is cultivated in Gardens, and flowers in Summer. The Leaves, Tendrils, Root, and Berries are used in Medicine, which are said to evacuate noxious Humours by Sweat, and Transpiration; to cure Disorders of the Skin; to expel Poison; and ease Pains of the Joints. It is a *Succedaneum* for *Sarsaparilla*; and is celebrated for curing Venereal Disorders, taken either in Decoction, or Powder.

2. *Smilax*; *aspera*; minus spinosa; fructu nigro. *C. B. P.* 236.

3. *Smilax*; *aspera*; *Indiæ Occidentalis*. *C. B. P.* 296.

4. *Smilax*; *Orientalis*; *farmentis aculeatis*; *excelsas arbores scandentibus*; *foliis non spinosis*. *T. C.* 45. *Boerb. Ind. Alt. Plant.*

*Boerhaave* takes Notice of some other Plants under the Name of *Smilax*, to which he gives the following Characters.

The Root is perennial and creeping; the Flowers are naked, hexapetalous, furnished with six broad and thick Stamina, and disposed in Spikes. The Ovary in the Bottom of the Flower is of a spherical Form, furnished with a short Tube, and becomes a Berry containing a single Stone.

1. *Smilax*; *aspera*; *racemosa*; *Polygonati folio*. *T.* 645. *Polygonatum racemosum*, Corn. 36. *Lilium convallium*, *Virginianum*, *Polygonati foliis racemosum*.

2. *Smilax*; *unifolia*; *humillima*. *Tourn. Inst.* 654. *Boerb. Ind. A.* 2. 64. *Monophyllum*, Offic. Ger. 330. *Emac.* 409. Raii Hist. 1. 668. *Monophyllum*, *sive unifolium*, Park. Theat. 505. *Unifolium*, *sive Ophrys unifolia*, *J. B.* 3. 534. *Lilium convallium minus*, *C. B. P.* 304. **ONE BLADE.**

This Plant grows in Woods and Thickets, and flowers in May and June. The Flower is used, which is esteemed alexipharmic and vulnerary.

**SMILAX DALECHAMPII.** A Name for the *Ilex*; *folio rotundiori*, *mollis*, *modiceque sinuato*; *sive Smilax Theophrasti*.

**SMILAX HORTENSIS.** A Name for the *Phaseolus vulgaris*.

**SMILAX HORTENSIS MINOR.** A Name for the *Phaseolus hortenensis minor*.

**SMILAX LÆVIS MAJOR.** A Name for the *Convolvulus*; *vulgaris*; *major*; *albus*.

**SMILAX LÆVIS MINOR.** A Name for the *Convolvulus*; *minor*; *arvensis*; *flore roseo*.

**SMILE,** *σμίλη*. A crooked Incision Knife, with two Edges. *Gorræus*.

**SMILIUM EMPLASTRUM.** See *ANSESSUS*.

**SMIRIS.** See *SMYRIS*.

**SMODICON,** *σμοδικόν*. A Remedy for Sugillations; from *σμούδις*, a Sugillation.

**SMYRIS** et **SMERILLUS**, Offic. *Smiris*, Mer. Pin. Boet. 591. Worm. 65. Aldrov. Mus. Metall. 653. Charlt. Foss. 27. **EMERY.**

*Smyris*, *Smyrillus*, or Emery of the Shops, *σμήρις* of the Greeks, *Smergium* of *Scrapius*, *Sumbagedi* of the *Arabians*, is a ferruginous, heavy, metallic Substance, of a Colour inclining to black, and so hard that Lapidaries use it in cutting and polishing their Diamonds, and Smiths to polish their Iron and Steel.

Emery is of three Kinds; the common, which is blackish, and very much used, is found in many Parts of *Europe*, especially in an Island on the Coast of *Tuscany*, and in *Guernsey* in the *British Channel*. The second is a hard uneven Sort of a

reddish Colour, like Bloodstone or Oker, but does not stain the Hands. This is, by some, reckoned among the Bloodstones. The third is of a blackish red Colour, streaked with gold-coloured Veins. It is found in the Gold-Mines of *Peru*, and really contains Gold. This Kind is thought by Chymists to be a Gold-Ore, or rather a Sort of immature or imperfect Gold; and therefore they esteem it very much, and extract a Tincture from it with Spirit of Sea-Salt, with which they fix Mercury in an Instant, and give this Substance the Name of the miraculous Precipitate, because they fancy they shall at length attain the true Art of making Gold by Means thereof.

Emery is recommended by *Dioscorides* and *Galen* as a Dentifrice; but it corrodes the Teeth too much, and insensibly wears them away. It is not now of any other Use in Physick. *Geoffroy*.

**SMYRNA,** *σμύrna*. Myrrh.

**SMYRNIUM.**

The Characters are;

The Leaves are large, various, and sometimes perfoliated, or perforated by the Stalk; the Seeds are thick, hemispherical, lunated, gibbous, channelled and black.

*Boerhaave* mentions three Sorts of *Smyrniun*, which are;

1. *Smyrniun*. Raii Synop. 3. 208. *Tourn. Inst.* 316. *Boerb. Ind. A.* 54. *Hippofelinum* & *Smyrniun*, Offic. *Hippofelinum*, Ger. 866. *quoad descript.* *Emac.* 1019. Raii Hist. 1. 437. *Hippofelinum*, *sive Smyrniun vulgare*, Park. Theat. 930. *Hippofelinum Theophrasti*, vel *Smyrniun Dioscoridis*, *C. B. P.* 154. *Macerone quibusdam Smyrniun*, *femine magno*, *nigro*, *J. B.* 3. 126. *Olusatrum quibusdam*. **ALEXANDERS.**

Alexanders has many large winged Leaves, of a yellowish green Colour, much larger than Smalage, or else pretty much resembling it. The Stalks grow to be three or four Foot high, channel'd or furrowed, having the like, but smaller, Leaves growing on them, and on their Tops pretty large Umbels of small five-leaved white Flowers, succeeded by large oblong corner'd black Seed. The Root is large and branched, blackish on the Outside, and white within. The whole Plant has a strong warm Taste. It grows upon the Rocks by the Seaside, and flowers in June. It is usually kept in Gardens for Use.

This is an Herb more used in the Kitchen than in Apothecaries Shops, being eat now as a Salad among other Herbs, or else boiled and eaten with Salt Meat. It is accounted to be of the Nature of Parsley or Smalage, but stronger, and therefore may be serviceable in opening Obstructions of the Liver and Spleen, to provoke Urine and the Catamenia, and to help the Dropsy and Jaundice. *Miller's Bot. Off.*

It is aperient, diuretic, and sudorific; excites the menstrual Discharge, and promotes a difficult Birth; it is good for the Colic, Asthma, and Ischiadic Pains. *Hist. Plant. Boerhaavio ascript.*

2. *Smyrniun*; peregrinum; rotundo folio. *C. C. P.* 154.

3. *Smyrniun*; peregrinum; folio oblongo. *C. B. P.* 154. *Boerb. Ind. Alt. Plant.*

**SODA.** An Head-ach. Sometimes, according to *Blancard*, it imports a Heat of the Stomach. *Soda Subethica*, is a soporiferous Pain of the Head. *Castellus* from *Bonetus*.

**SODA**, is, also, the lixivial Salt of *KALI*.

**SOIA.** See *PHASEOLUS*.

**SOL.** The Sun, in Chemistry, is the Character for Gold. See *AURUM*.

In the *Collectanea Chymica Leidensia*, there are several Preparations of Gold described, which are not used in the present Pharmacy.

**SOLANIFOLIA.** A Name for the *Circæa*; *Lutetiana*; and for the *Circæa*; *minima*.

**SOLANO-CONGENER.** See *BELLADONNA*.

**SOLANOIDES.** Bastard Nightshade.

The Characters are;

It hath a rose-shaped Flower, consisting of five Leaves, whose Pointal afterwards becomes a roundish Fruit, having one hard Seed, which is covered with a thin Pulp, so as to have the Appearance of a Berry.

*Miller* mentions two Sorts of *Solanoides*, which are;

1. *Solanoides Americana*; *Circææ foliis canescentibus*. *Tourn.*

2. *Solanoides Americana Circææ*; *foliis glabris*. *Tourn.*

These Plants are Natives of the warmer Parts of *America*, from whence their Seeds have been brought into *Europe*; and the Plants are now become pretty common in the Gardens of the Curious.

The Fruit of these Plants afford a fine red Colour, when bruised; but it soon fades on Paper, which renders it worth little. If a Quantity of these Fruit is squeezed into a Glass



Glass of fair Water, so as to colour the Water, of a deep red, and a Stem of Flowers of the Tuberoſe put into the Glass, it will in one Night imbibe ſo much of the Liquor as to variegate the Flowers with a Roſe Colour. *Miller's Dictionary*.

## SOLANUM.

The Characters are ;

It has the Flower of the Alkekengi ; the Calyx is monophyllous, quinquefid, ſtellated, and not veſicary. The Fruit is ſoft, ſucculent, of an oval or globular Figure, and full of Seeds, which are generally flat.

*Boerhaave* mentions four and twenty Sorts of *Solanum* ; which are,

1. *Solanum* ; ſcandens ; vel *Dulcamara*. See AMARA-DULCIS.

2. *Solanum* ; ſcandens ; vel *Dulcamara* ; flore albo. *C. B. P.* 167.

3. *Solanum* ; ſcandens ; vel *Dulcamara* ; foliis ex albo variegatis. *M. H. B.* 194.

4. *Solanum* ; Officinarum ; acinis nigricantibus. *C. B. P.* 166. *Tourn. Inſt.* 148. *Boerb. Ind. A.* 2. 67. *Solanum vulgare*, *Park. Theat.* 346. *Raii Hiſt.* 1. 672. *Synop.* 3. 265. *Solanum hortense*, *Ger.* 268. *Emac.* 339. *Solanum hortense*, *five vulgare*, *J. B.* 3. 608. *Nilentfunda*, *Hort. Mal. Part.* 10. p. 145. *T.* 73. *Aguara-quiyà*, *Piſon.* 224. NIGHT-SHADE.

*Cordus* and *J. Baubine* have taken the Flower of this Plant to be pentapetalous ; whereas it is certainly monopetalous. It is commonly believed that the Seed of the Nightshade, with black Fruit, produces thoſe which have a red and yellow Fruit. But beſides that Experience ſhews the contrary, theſe Species are diſtinguiſhed by other more particular Circumſtances, as will appear by their Deſcriptions.

The Nightshade, with black Fruit, has a Root half a Foot long, three or four Lines thick at the Neck, waving, whitish, fibrous and hairy ; the Stalk, which is full of Pith, riſes about a Foot and a half high, three Lines thick, greenish, rough, and angular, divided commonly at the Diſtance of nine or ten Inches, into ſeveral Branches, ſtretching out upon the Sides, and often bending downward ; garniſhed with Leaves growing alternately, which beginning with a Tail half an Inch long, increaſe to an Inch and a half in Breadth, and two Inches long ; they are pointed, waved rather than notched, dark, green, ſmooth, and ſhining ; the Pedicle lengthens itſelf into a Rib ; the Waves of which bend themſelves about till they are loſt in the Extremities of the Leaves. Thoſe which grow upon the Diviſions of the Branches, are ſmaller, rounder, and more pointed at the Top, where the Sprigs are ſet with two or three little Threads.

The Flowers do not uſually grow out of the Boſoms of the Leaves, as in moſt other Plants, but out of the Branches themſelves, a little below the Leaves. Theſe Flowers grow together from five to eight, upon a Stalk an Inch and a half long, divided into ſlender Pedicles, four or five Lines long. Each Flower is white, monopetalous, of the Shape of a Baſon, three Lines or three and a half in Diameter, perforated at the Bottom, where it is yellowish, and, as it were, terminated in a Ring ; divided from the middle into five Segments, long, pointed and diſpoſed in Form of a Star. From the Sides of the Bottom of the Flower ariſe ſhort Chives, charged each with a yellow Summit, duſty, narrow, a Line and a half long. All theſe Summits join together, and hide the Bottom of the Pointal, the Baſis whereof is almoſt round, pale green ; jointed in the Hole of the Flower, and fixed in the Bottom of the Empalement ; this Empalement is a little greenish Funnel, cut into five obtuſe Points. When the Flower is gone, the Pointal becomes a ſpherical Fruit, pretty hard, at firſt of an Olive-green, afterwards black, about four Lines Diameter, full of a limpid Juice, and ſeveral whitish Seeds, a Line long, flat, rounded, bordered with a ſmall greenish Skin, eaſily ſeparated from it, diſpoſed in a Ring about the Placenta, which is in the middle of the Fruit, and diſtributes the Nouriſhment to all the Seeds.

The Root is in a manner inſipid ; the Leaves have an herby Taſte, a little ſaltish ; the Fruit is ſomething ſharp and winy ; the whole Plant has a narcotic Odour, but not ſo ſtrong as in the other Species.

It flowers in *July*, *Auguſt*, and *September* ; the Fruit is ripe in *September* and *October*.

The Leaves give but a faint Tincture of red to the blue Paper ; but the ripe Fruit gives it a very deep one ; which gives us Reaſon to conjecture, that the Sal Ammoniac in this Plant, is tempered in the Leaves by a conſiderable Quantity of ſetid Oil and Earth ; but that the acid Part of this Salt is very much diſengaged in the ripe Fruit ; ſo that we muſt make choice of the Parts of this Plant, as different Occaſions may require. The Berries, for Example, are more

cooling, but yet more repellent than the Leaves, which lenify by reſolving, cleaning, and abſorbing.

By the Chymical Analyſis they yield a great deal of volatile concrete Salt.

Nightshade is uſed to allay Inflammations, to ſoften and relax the Fibres which undergo too violent a Tenſion. They apply the bruised Herb to the Piles, or bath the Parts, with the Juice a little warmed. They work this Juice for ſome time in a leaden Mortar, to anoint the Cancer with. The ſame Juice quickened with a ſixth Part of Spirit of Wine, well deſlegmated, is very good for the St. Anthony's Fire, Tetters, Puſtules, Pimples, and all the Diſeaſes of the Skin. The Nightshade is uſed in the Ointment of Poplar, and all anodyne Cataplaſms. *Cæſalpinus* affirms, that they give the Water, or the Juice, to drink in the Inflammation of the Ventricle, and Heat of Urine ; he ſays, that three Ounces of the ſame Water, taken with an equal Quantity of Wormwood Water, evacuates by Sweat. Nevertheless, the internal Uſe of this Plant is very much ſuſpected. *Tragus* ſays, that it kills Hogs, and adviſes not to uſe the Water of it internally, till it has been diſtilled two or three Years. *Martyn's Tournesfort*.

5. *Solanum* ; officinarum, acinis Puniceis. *C. B. P.* 166.

6. *Solanum* ; officinarum ; acinis ex luteo viſcentibus.

7. *Solanum* ; officinarum ; folio laciniato *Stramonii*, flore parvo ; albo ; acinis nigris.

8. *Solanum* ; lanuginosum ; hortensi ſimile. *Raii H.* 672.

9. *Solanum* ; tuberosum ; eſculentum. See BATTATA VIRGINIANA.

10. *Solanum* ; pomiferum ; fruteſcens ; Africanum ; spinosum ; flore Borriginis ; foliis profundè laciniatis.

11. *Solanum* ; pomiferum ; fruteſcens ; Africanum ; spinosum, flore Borriginis ; folio pallidius viſcente, ſubtus tomentoso.

12. *Solanum* ; pomiferum ; fruteſcens ; flore Borriginis ; folio tomentoso ; incano ; ſolo caule spinoso.

13. *Solanum* ; incanum ; Chinense ; minus spinosum ; floribus parvis, umbellatis. *Pluk. Almag.* 351.

14. *Solanum* ; fruticosum ; bacciferum. See AMOMUM PLINII.

15. *Solanum* ; lignosum ; Africanum ; ſempervirens ; Laurinis foliis. *H. A.* 2. 191.

16. *Solanum* ; Africanum ; lignosum ; folio ; atroviridi ; anguſti ; oblongo, obtuſo.

17. *Solanum* ; Guineenſe ; fructu magno inſtar Ceraſi, nigerrimo, umbellato.

18. *Solanum* ; Americanum ; caule & pedunculo nigro ; & folio Acanthi, spinosis.

19. *Solanum* ; Americanum ; caule pedunculo ; folio Malvæ, tomentosis, & spinis albis donatis ; fructu luteo.

20. *Solanum* ; spinosum ; fructu rotundo. *C. B. P.* 167. *Pomum Hierachuntanum*. *Imperat.* 665. *Mala infana*, nigra. *Rauwolf. Lugd. Append.*

21. *Solanum* ; fruticosum ; Indicum ; fructu rubro. *T.* 149. *Cherubunda*. *H. Mal.* 2. 67. *Scheruſchunda*. *IC. Tab.* 36.

22. *Solanum* ; Africanum ; spinosum ; fructu canefcente, undulato. *Triumfett. Prælus.* 49.

23. *Solanum* ; pomiferum ; non spinosum ; fructu duro. *Vaill.*

24. *Solanum* ; spinosum ; incanum ; foliis ſinuatis ; flore Borriginis ; fructu luteo ; ovuli Gallinacei magnitudine & formâ. *Triumf. Boerb. Ind. Alt. Plant.*

The firſt and ſecond Species are called *Dulcamara*, or *Dulcamara*, (*Bitter-sweet*) becauſe if you chew a Bit of them newly cropt, it diffuſes a Bitterneſs over all the Mouth, and ſoon after a Honey-like Sweetneſs. The Juice of this Plant is very penetrating, ſaponaceous and detergent, whence it is proper in Wounds where Blood is extravafated and grumous. It is, alſo, diuretic, expelling Gravel from the Kidneys ; and ſudoriſic, for which Reaſon Phyſicians adviſe a very ſtrong Decoction of the tender Branches to be drank in a Phthiſis, where Attenuants and Cleanſers are required ; but where there is an exceſſive Thinneſs of Blood, which maniſeſts itſelf by natural Sweats, it is prejudicial. It is a very ſerviceable Plant in Inflammations, and too great a Tenſeneſs of the Fibres, and the bruised Leaves are good in the Hæmorrhoids : The Juice is very good in a Cancer, to waſh the ſame ; and with rectify'd Spirit of Wine, is proper in an Eryſipelas, and all cutaneous Diſeaſes. It has the Virtues of Liquorice, and the Decoction of it is highly ſerviceable in all Diſorders from Obſtructions, for it is deterſive and aperient, and is commended in all peccoral Diſtempers, Ulcers, external or internal, the Scurvy, and Lues Venera, It is very diuretic, and no Plant is more proper for a Camp, where the Soldiers have received any internal or external Hurt. Outwardly, it is uſeful in the Gout to eaſe the Pains. Phyſicians



ficians highly extol the outward Use of this Plant, and, I think, with good Reason: They take the bruised Leaves, and expressing the Juice, mix it with Ointment of Roses, and apply it to the Head in a Phrensy; as a Refrigerent and Anodyne, whence the Juice is said to be an Antiphlogistic. The Leaves bruised with Salt, or Nitre, are proper in Inflammations, Gangrenes, and Suppurations. The Plant taken inwardly, is said to mitigate unnatural Heat, to refrigerate, and comfort the internal Parts. But as many Children in the Country are seiz'd with Convulsions, and destroy'd by the Use of it, which, also, proves mortal to Poultry, as we are assur'd by the Peasants, this Plant is to be suspected, as well as its Berries. The Leaves bruised are fit to be externally applied in Inflammations of the Hæmorrhoids. The seventh and eighth are not so soon to be trusted. The ninth has Tubera for Roots, and was first discovered in *America*, where it is commended as excellent Aliment; but if too freely eaten, they are suffocating. The Tubera roasted under the Ashes, are very wholesome Aliment, and are said to be provocative. The fourteenth is thought to be the *Solanum* of the Antients, and the Apples are said to be of a refrigerating Quality; but I can say nothing of their Virtue, for want of Experience. The seventeenth is very poisonous, for its Berries cause Death, almost without any visible Symptoms. *Hist. Plant. ascript. Boerhaave.*

*Solani Species, Fockii Fockii dicta javanensis Bontii.*

By the Leaves, Flowers and Fruit, it is certain, that this Plant is a Species of *Solanum*, only the Fruit is much larger than that of our *Solanum*, as exceeding sometimes the Length of a Cubit, as thick as a Man's Arm, and of so smooth and polish'd a Rind, as to represent a Man's Face like a Mirror. It is full of minute Seeds, like that of the common *Solanum*. The Fruits in these Countries (*Java*, and the neighbouring Islands) are not only esculent, but of a very delicious Savour, if boiled with Wine and Pepper, and have the same Taste as the Stool of an Artichoke. They are of good Nutriment, and of a diuretic Quality, for which Reason they are very serviceable in the Stone of the Bladder, and Affections of the Kidneys.

There is a wild Species of this Plant, which bears a perfectly spherical Fruit, and of a yellow Colour when ripe (the Garden Sort being purple or white like Hail) and of a bitter Taste, so as none but the wild Boars and Rhinoceroses will eat it. *Raii Hist. Plant.*

*Solanum vesicarium Indicum.* C. B. *Solanum five Halicacabum Indicum.* J. B. *Halicacabum Indicum rectum.* Park. *Camaru Bassiensibus.* Marggr.

This Plant has a pretty thick, and, according to *Parkinson*, a firm, erect, angulous and nodous Stalk, of the Height of a Cubit, or two, spreading into many Branches, adorn'd with Leaves somewhat larger than those of the common *Halicacabum*, jagged, and of a smutty green Colour. The Flowers grow single from the Divarications of the Branches, and the Bosom of the Leaves, and are of a pale yellow Colour, like those of the common *Solanum*. The Bladders, or Fruit, are equal to those of the *Halicacabum*, with a Stone so large, as sometimes to burst the Bladder into four Parts. The whole Plant is inspid, but exudes a mucilaginous Juice at the Joints, of the strong Smell of the *Lycopersicon*. *Raii Hist. Plant. ex Parkinson.* I find no Virtue ascribed to it.

SOLANUM is also a Name for several Sorts of *Alkekengi*, *Jalapa*, *Lycopersicon*, and *Stramonium*.

SOLANUM BARBADENSE. A Name for the *Phytolacca*; *Americana*; *fructu minori*.

SOLANUM MELANOCERASOS. See BELLADONNA.

SOLANUM POMIFERUM. A Name for the *Melangenena*, *fructu oblongo violacco*; and for the *Melangenena*, *fructu oblongo albo*.

SOLANUM QUADRIFOLIUM. A Name for the *Herba Paris*.

SOLANUM RACEMOSUM & *Virginianum*. Names for the *Phytolacca Americana*; *fructu majori*.

SOLARIS HERBA, is the HELIOTROPIUM.

SOLATER, or SOLATUR. Quicksilver. *Rulandus*.

SOLDANELLA.

The Characters are;

The Root is perennial; the Leaves are stiff, and less than those of *Asarabacca*. The Flower is Bell-shaped, and simbricated; and the Fruit is cylindrical, and gaping at the Top.

*Boerhaave* mentions but one Sort of *Soldanella*, which is,

1. *Soldanella*; *Alpina*; *rotundifolia*. C. B. P. 295. *Tourn. Inst.* 82. *Boerb. Ind. A.* 202. *Soldanella Alpina*, Ger. 690. *Soldanella Alpina rotundifolia*, C. B. P. 295. *Tourn. Inst.* 82. *Soldanella montana quibusdam*, J. B. 3. 817. MOUNTAIN BINDWEED.

It grows on the Alps, flowers in *July*, and the Herb is reckon'd by *Monti* among Vulneraries.

SOLDURA. The Pæces of alkaline Salts. *Libavius*.

SOLEA. The Sole-Fish.

There are but few Fishes which have so excellent a Taste, and are at the same Time so wholesome as the Sole. This Fish is of different Bignesses and Kinds.

It is tender, short, firm, having but little viscous, and gross Juices, and contains a just Proportion of oily and volatile saline Particles, which makes it have so agreeable a Taste, and render it nourishing, productive of good Juice, and easy of Digestion. The Head of this Fish being dried and reduced to Powder, is reckoned good for the Stone, Gravel, and Scurvy. It produces no ill Effects, if it be not immoderately used.

*Buglossus* is another Latin Name for it from Βούγλωσσοι, from βῆς, an Ox, and γλωσσα, a Tongue, because in Form it resembles a Neat's Tongue. *Lemery on Foods.*

SOLELASAR. An alkaline Salt.

SOLEN. σολήν. A hollow surgical Instrument, in which fractur'd Limbs were plac'd. It is, also, the Name of an oblong Sea Shell-Fish, of which Naturalists take Notice of two Species.

SOLENARIUM. σολενάριον. A channell'd surgical Instrument, in which the Penis was laid, as a fractur'd Limb in the *Solen*.

SOLEUS.

This is a large, fleshy, flat Muscle, nearly of an oval Figure, and thicker in the Middle than at the Edges. It has its Name from its supposed Likeness to a Sole. It is situated on the Backside of the Leg, lower down than the *Gastrocnemii*, by which it is covered; and these three Muscles form the Calf of the Leg.

It is fixed above, partly to the Tibia, and partly to the Fibula. It is fixed to above one Third of the upper Part of the Backside of the Fibula, and a little to the articular Ligament of the Head of this Bone. It is, also, fixed to the Backside of the Tibia, from the oblique Line or Impression which terminates the Insertion of the *Popliteus*, down to the Middle of the internal Angle of the Bone; afterwards, leaving these two Bones, it ends in a broad, strong Tendon, which, together with that of the *Gastrocnemii*, forms what is call'd *Tendo Achillis*. This strong Tendon contracts a little in its Passage to the Os Calcis, and then expanding a little, it is inserted obliquely in the Backside of the Bone, all the Way to the Tuberosity. The outer, or posterior Fibres of this large Tendon, are the longest; the inner, or anterior Fibres, shortest; and the rest are longer or shorter, in Proportion to their Nearness to these two Portions.

The fleshy Body of the *Soleus* seems to consist of two Planes of Fibres at least, that on the Backside of the Muscle being the most simple; and the other, or that next the Bone, being penniform.

This Muscle, and the two *Gastrocnemii*, form what Anatomists call a true Triceps.

The *Gastrocnemii* and *Soleus* make a Kind of Triceps, and by their common Tendon extend the Foot, and keep it extended against the strongest Resistance. It is by their Means that we raise the whole Body, even with an additional Burthen, when we stand a Tip toes, and that we walk, run, and jump. The Length of the posterior Portion of the Os Calcis gives them a great Advantage in acting, by removing the Line of their Direction from the Axis of Motion.

The Motions of the Foot perform'd by these Muscles, may be referred to the first two Kinds of Levers. When we stand a Tip-toes, the Foot represents a Lever of the second Kind, the Fulcrum being then at one End, the Power at the other, and the Weight between them: And we have a Lever of the first Kind, when the Leg being fixed, we endeavour to overcome any moveable Resistance with the Toes, or whenever we move the Foot held off the Ground.

These Muscles not only extend the Foot on the Leg, but, also, the Leg on the Foot, as appears evidently when after a moderate Genuflexion, we raise our Bodies; for then the Foot remains fix'd, while these Muscles extend the Leg; and it is here to be observed, that this Genuflexion is not made by the Action of any Flexors, but only by the Relaxation of the proper Extensors.

The *Gastrocnemii*, by their Insertion in the Os Femoris, may in great Efforts move the Leg on the Thigh, and the Thigh on the Leg, as Assistants to the *Biceps*, *Semi-Membranosus*, *Semi-Tendinosus*, *Gracilis Internus*, and *Sartorius*. In these Motions the superior Extremities of the *Gastrocnemii* cross under the lower Extremities of the Muscles last named. The fleshy Fibres of the *Gastrocnemii* are very long, and there is a great Distance between their two Insertions; and,

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on this Account, these Muscles are better fitted for large Degrees of Motion than for Strength.

The *Soleus*, by the Multitude of its fleshy Fibres, and its penniform Structure, is more proper for strong than large Motions, and seems principally to sustain the *Gastrocnemii* in the Motions begun by them. The tendinous Portions of this Muscle, and of the *Gastrocnemii*, though they form a strong Tendon altogether, seem nevertheless to slide a little upon each other in the different Flexions and Extensions of the Foot. *Winflow's Anatomy.*

**SOLIDAGO.** A Name for the *Doria*; *quæ Jacobæa*; *Alpina*; *foliis longioribus*; *ferratis*.

**SOLIUM.** The Bathing Vessel in the antient Baths.

**SOLIUM** is, also, a Name for one Species of flat Worm, for there are two Sorts of *Tenias*; one properly so call'd, that neither moves, nor has any form'd Head; the other call'd *Solium*, from its being the only one of its Species in the Body, which moves, and has a very regular round Head, resembling a Wart.

**SOLOMA.** Silver; that is, Silver of the Chymists. *Rulandus.*

**SOLSEQUIUM.** Sulphur.

**SOLVAS.** An obscure Word in *Paracelsus*, importing something which dissolves Bole, but does not explain what.

**SOLUTIO.** Solution. This imports the Termination of a Disease; an Inflammation, for Example, by Resolution.

Chymical Solution is explain'd under the Article **MENSTRUUM**. Solution of the Belly, is rendering it laxative.

It has been a constant and received Opinion among the Professors of the Art of Chymistry, and still prevails among them, that the Solution of Bodies, which is of excellent Use in Chymistry, is effected principally by Means of the Pores of those Bodies. Solid Bodies, they say, on account of the different Structure and Connexion of the Parts of which they consist, are furnished with Variety of Pores and Passages, through which the smallest Particles of the Menstruum find an Entrance, and, by insinuating themselves into the Interstices, dissolve the Connexion. These Pores, they imagine to be of different Magnitude and Figure, and to belong to fluid as well as solid Bodies, and to admit none but congruous Particles, like to those of which the Dissolvent is composed; whence they conclude, that different Bodies require different Menstruums.

But, however subtle and ingenious that Opinion may appear, in point of Invention, or how specious soever in the Eye of Reason, we doubt not, upon a thorough Examination and deeper Insight into the Matter, to shew, that it is built upon a very weak and slippery Foundation, which we demonstrate in the following Manner.

First, then, we freely grant, that in all hard and compact Bodies there are some Pores or Cavities, not of the same, but different Figures, Part of which admit the Aereo-ethereal Fluid, while into others, from whom that Fluid is expelled or excluded, some other convenient aqueous or spirituous Liquid may find an Entrance. This Difference of Pores in Bodies is, also, the Cause of their specific Gravity, or that some are heavier or lighter than others. But, however, we ought to understand, that if the Pores or Interstices between the Parts of solid Bodies are possessed by Fluids, we are not so much to regard the Figure of those Pores, as their Diameter, whether it be larger or narrower; for it is known from Mechanics, that a Fluid enters Pores, of whatever Figure they are, if it be so qualified as to meet with no Obstruction on account of their Diameter. And, therefore, though we do not absolutely deny, that there are such Pores in solid Bodies, yet no Reason obliges us to grant the same in Fluids: For, though in solid Bodies the Parts more firmly cohere, and are at Rest among themselves; yet it is otherwise in Fluids whose Parts are agitated by the Interfluent Ether with a constant and continual Motion, and are perpetually changing their Situation. Since, therefore, it is impossible so much as to conceive any constant Disposition of Pores in a Fluid, it is evident, that the different Arrangement of their Parts has nothing to do in Solutions; for when a Liquid occupies the Pores of a Solid, it leaves it in a more light and tubulely fluid State than when it enter'd. But the Case is otherwise in Fluids, for these, when the Ether is expelled, which impels Fluids to continual Motion, are deprived of all Motion, and necessarily concrete into a Solid. Thus Water, when the subtle ethereal Matter is expressed by the incumbent very cold Air, congeals into a hard and compact Substance. To this it must be added, that Fluids, when they admit a large Quantity of Ether, affect a large Space, as it happens when they are heated, whereas Solids are not affected in the same Manner.

Besides, since Fire liquifies Metals and Stones, Mercury softens and amalgamates Metal, one Ounce of Acid dis-

solves the like Quantity of alkaline Salt, and one Ounce of highly rectify'd Spirit of Wine receives one Ounce of pure distill'd Oil, for instance, Oil of Cloves, of Lavender, or Camphire, I see not how this Reception of Solids into the Pores of a Fluid can any way take Place; for the Pores of the dissolvent Menstruum cannot be greater than, or equal to, the whole Body.

Nor can we by any Means comprehend how Copper put into a Solution of Silver, or Iron into a Solution of Copper, can cause a Precipitation in these Solutions, because these solid Bodies can by no Means enter the Pores of the Menstruum: Nor can it be explain'd from this Hypothesis why highly rectify'd Spirit of Wine pour'd on saturated Spirit of Sal Ammoniac should precipitate its volatile Salt, or why Water should precipitate a Solution of Camphire in Spirit of Wine.

Some there are who press'd with these Difficulties, take another Method of Explication, and alledge the Similitude of Parts between the Dissolvent and the Body to be dissolved. But neither will this Hypothesis put the Matter beyond all Doubt, since we observe that heterogeneous, or quite dissimilar Bodies easily unite with one another, and dissolve one another more readily than homogeneous Bodies use to do; for every one knows, that all Acids very readily dissolve Salt, or alkaline Bodies; that Water admits Earth, as we see, for Instance, in a Decoction of Quick-lime; that insipid Water receives all Kinds of Salts, and that alkaline Menstruums are well fitted for dissolving Sulphurs.

Nothing, then, remains but to search after some other, and these true and genuine, Causes of Solutions, which are affected by Menstruums. And the most probable Account which can be given of the Matter and the most easy to be conceived seems to us to be, that we should suppose the Fluid, in putting the Parts of the Dissolvent in Motion, to hurry them along with itself in the same Motion of Fluidity, and by this Means unite itself with them. Thus we see that Water puts all Kinds of Salts into a like Motion of Fluidity, and so unites itself.

Moreover, all distilled Oil, all resinous Balsamics, are dissolved by a sulphureous, highly rectify'd Spirit of Wine, and by that Means are incorporated together. And Solutions are generally made when the active Principle, especially the saline, intimately unites itself with the Dissolvent in such a Manner, that both together constitute a third, that is, a neutral Salt; which done, this very neutral Salt, by an easy Compliance with the Motion of the Water, is itself readily dissolved. Thus menstruous Acids, which are nothing but a Solution of an acid Salt into a Phlegm, while they dissolve alkaline Substances, whether earthy or saline, pass into a neutral Salt, which, after the Manner of all Salts, liquifies into a Phlegm. In the same Manner Metals, when dissolved by menstruous Acids, as Aqua-Fortis, or Aqua-Regis, while these acid Salts associate with the metalline Particles, pass into a third Kind of Salt, which appears after an Evaporation of the Menstruum, and is readily dissolved in the Water contained in the Menstruum.

From all these Experiments it appears, that a Menstruum which cannot be united with the Dissolvent, can effect no Solution. Thus highly rectify'd Spirit of Wine cannot be united with common Salt, because the inflammable Sulphur refuses a Conjunction with this Kind of Salt; and hence it is that common Salt, as well as other Salts, cannot be dissolv'd by this highly rectify'd Spirit. For a like Reason, oleous and alkaline Menstruums dissolve not Metals, because neither the Sal Alkali, nor the Oil, can insinuate themselves into an intimate Union of the Parts which constitute the Metals, and not at all because they are contrary to one another in their Pores and the Figure of their Parts; on the contrary, highly rectify'd Spirit of Wine very readily unites with distilled Oils and Resins, which are only a more subtle Kind of Oil, coagulated by an Acid, because they meet together in a friendly Manner, and thus Water with Water, and Water with Ice, readily mix together.

As, therefore, a Solution is effected by an Union of the Dissolvent and the Thing to be dissolved, so when this Union is again destroyed, and the Dissolvent forsakes the Thing dissolved, or one of them is separated from another, the Fluidity itself ceases, and the dissolved Substance is separated from the Menstruum, which Action the Chymists call *Precipitation*. It is a great Error, therefore, to imagine that Precipitation happens because the Pores of the Menstruum, which contained the Thing dissolved, are occupy'd by some other Matter, whence there must of necessity be an Expulsion of the Parts of the dissolved Body from the Pores of the Menstruum. It might be more truly said, that Precipitation is no other than a new Solution, or a new Union of the Menstruum with another Body, I mean while the precipi-

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tating Matter unites more closely with that Menstruum with which the Body was before united.

The Reason why the Menstruum, with which the Body was before united, applies itself to a new and even precipitating Body, and unites itself with it, seems to be, that the Menstruum, more readily and freely incorporates with the Precipitant, than with the former Body, on Account of the greater Agreement of Parts, which is a Point that deserves Confirmation by Experiments. Thus Copper put in a Solution of Silver made by Aqua-fortis, causes it to subside; and Iron in a Solution of Copper, made in the like Manner by Aqua-fortis, soon precipitates the Copper; and Zinc, whenever added to a Solution of Iron by Aqua-fortis, immediately causes the Iron to subside to the Bottom; and if you have a Mind again to precipitate the Zinc, it may very well be done by throwing in some Salt of Tartar.

The Reason to be given for these different Precipitations is as follows: Because the acid Salt of the Nitre, which is in the Aqua-fortis, is better qualified to associate with the Salt of Tartar than with the Zinc, hence it lets the Zinc subside; and because the acid Salt of the Nitre will much more easily incorporate with Zinc than with Iron, hence the Iron is precipitated; and again, because the same acid Salt more readily unites with Iron than Copper, therefore Iron put into a Solution of Copper, causes it to sink to the Bottom, and thus it is in other Instances. And it is besides worth our Observation, that an Acid more violently precipitates such Bodies, which have been dissolved in a more subtle Acid. Thus Spirit of Vitriol, poured on Solutions of alkaline, earthy Bodies, such as Mother of Pearl, Corals, Crabs Eyes, and Egg-shells, dissolved in Vinegar, suddenly precipitates them to the Bottom. The Reason is obvious, and is because a stronger Acid more intimately unites with terrestrial alkaline Particles, than does a milder one, whence this latter being left to itself, very speedily sinks and subsides. And therefore, whenever Spirit of Vitriol is poured on Sugar of Lead, which is a Salt prepared with Lead and distilled Vinegar, there happens in like Manner a Precipitation of the Lead; but when these are distilled, then the Spirit of the distilled Vinegar, and not the Spirit of Vitriol, ascends and is distilled, the Spirit of Vitriol being left in the Bottom, united with the saturnine Body; and the same Thing happens in those other Solutions of alkaline Substances made with Vinegar, which have been already mentioned.

Moreover, Water precipitates Solutions of resinous Bodies made with highly rectified Spirit of Wine, not because this Spirit enters the Pores of the Water, but because it more easily and freely unites with Water than with Resins. The same highly rectified Spirit of Wine precipitates the volatile Salt from the Spirit of Sal-ammoniac, which is prepared with Water. In short, a Solution of Salt of Tartar precipitates a Solution of Pearls, or of Crabs Eyes made with Vinegar, because the Salt of Tartar more easily and readily unites with these Acids than with these earthy Bodies, whence also an Addition of Crabs Eyes to the Solution of Salt of Tartar will not destroy the Union. It is a known Experiment also, that common Salt cast into a Solution of Silver by Aqua-fortis, precipitates it into a white Magistery, for scarce any other Reason, than that the highly penetrating Acid of the Nitre incorporates with the Earth of the common Salt, which is of an alkaline Nature, abandoning the Silver with which it was united.

From all these Experiments which have been produced, it abundantly appears that *Syncretism* and *Diacrisis*, or *Union* and *Separation*, are the greatest Instruments and most simple Operations of Nature, for the performing so many and so great Effects, since neither Nutrition, Generation, Virtue, Accretion, Mutation of Form or Texture, Solution nor Coagulation, can be understood or explained without them. And hence we may be convinced, also, that the Doctrines of Pores and Particles of various Figures to which the Chymists and Naturalists betake themselves for Refuge, when pressed with Difficulties, is of no Service, as having no good Foundation in the Nature of the Thing itself; and that many and great Phenomena of Nature may far more easily, and with much less Perplexity, be explained and illustrated by the two fundamental Points of *Union* and *Separation*. *P. Hoffman, Observ. Physico-Chym.*

SOLUTIVA. Laxatives.

SOMNAMBULO. A Person who walks in his Sleep.

SOMNIFERA. Medicines which induce Sleep.

SOMNIUM. A Dream or Vision. See INSOMNIUM.

*Pythagoras* taught that the Air was inhabited by the Souls of Demons or Heroes, and that these Beings send to Mankind Dreams, Signs and Diseases, and also to Beasts.

The Ancients were strongly possessed with an Opinion,

that their Gods communicated to the Sick in Dreams, Remedies for their Distempers.

*Galen* says, that once, when he had a fixed Pain in the Part where the Diaphragm is attach'd to the Liver, he dreamed that *Æsculapius* advised him to open the Artery betwixt the Thumb and the second Finger of the Right Hand; which he did, and found himself immediately cured.

*Plutarch Synop.* 9. 10. examines into the Reasons why autumnal Dreams are more uncertain than others.

*Phayllus*, General of the *Phocians*, in the War betwixt them and the *Thebans*, dreamed that he was like the Statue of a consumptive Person, dedicated by *Hippocrates* at *Delphi*, and soon after died consumptive.

SOMI-OLENTIA. Sleepiness. See LETHARGUS.

SOMNUS. Sleep. See OPIUM, and LETHARGUS.

All Bodies, by their Actions upon one another, and by the Action of the circumambient Bodies, are liable to be impaired and wasted; and all animal Bodies, from an active and Self-moving Principle within them, as well as from the Rubs of Bodies without them, are constantly throwing off some of their superfluous and decayed Parts; so that animal Bodies are in a perpetual Flux. To restore this Decay and Wasting of animal Bodies, Nature has wisely made alternate Periods of Labour and Rest, Sleeping and Watching, necessary to our Being; the one for the active Employments of Life, to provide for and take in the Materials of our Nourishment; the other to apply those Materials to the proper wasted Part, and to supply the Expences of Living. And it seems as improper, in the Order of Nature, to disturb the animal Functions in the Time of Sleep, by any other Employment, than that of the secondary Concoctions (as they are called) that is, the applying the Nourishment to the decayed Parts, to recruit the Blood, perfect the Secretions, and to lay up plenty of Spirits, or (to speak more philosophically) to restore the weakened Tone of nervous Fibres; that is, in short, to restore the Decays of Watching and Action: This, I say, is as improper, as it would be (were it possible) to eat or drink, or make Provision for the Necessities of Life, in the Time of Sleeping. Hence is evident, the Absurdity of heavy, various and luxurious Suppers, or of going to Rest till many Hours after such a Meal, which must otherwise break in upon the Order of Nature, and the due and appointed Times of Sleeping and Watching. Wherefore, I advise the Valetudinary, the Studious, and the Contemplative, either to make no Suppers, or only of vegetable Food; and to take a due Time for Watching after them.

There is nothing more certain, than that (abstracting from acute Cases) our Sleep is sound, sweet and refreshing, according as the alimentary Organs are easy, quiet, and clean. If any one, not suffering under any Disease, is disturbed in his Sleep, 'tis certain his Stomach is filled with Food or Crudities; or his Guts filled with Wind, Cholera, or superfluous Chyle: And those restless Nights, and the Difficulty of going to sleep, which are generally ascribed to the Vapours, are entirely owing to these Causes, tho' they be not so strong as to become sensible; for then Pain is added to Watching, and they are felt. And upon Complaints of such restless Nights, I never once failed, upon Enquiry, of finding the true Cause in the Diet of the preceding Day, or of some few Days before; and constantly have discovered, that some Error in Eating and Drinking, either in Quantity or Quality, has produced them. I have been astonished to see hypochondriacal and hysterical People, restless all Night, tossing and tumbling till towards the Morning, then dropping asleep till late Hours, awake heavy, oppressed and unrefreshed, complain of being hag-ridden, tired and wearied, as if they had been whipp'd, spurred, lashed, and beaten, through all the Watches of the Night; rise with foul Mouths and white Tongues, Belchings, Yawnings, Coughing, Spitting, or Reaching and Heaving, without Appetite, Spirits or Life, all the Day-time, begin to live and breathe, become chearful and hungry, about ten, eleven, or twelve o'Clock at Night, eat a hearty, various, and luxurious Supper, drink a Cheeruping Cup of the best, become as merry as Crickets, and long to sit up later, at last, tumble to bed, and repeat the same Farce over again. The Reason of all this Complaint is the Load on the Stomach, that will not suffer them to rest till it is got off. The sharp and crude Humours twitching and twinging the nervous Fibres, and Coats of the Bowels, become like so many Needles and Pins constantly running through them, tho' not always with sensible Pain; the unconcocted Chyle stopping or circulating slowly, first in the Bowels, then in the smallest Vessels, begets these Convulsions, Flatus, Night-misres, and Oppressions of Spirits. So that the secondary Digestions are not over till next Evening, (hence their Want of Appetite :) And when these are finished, their Stomachs come, and their Spirits



Spirits flow; and thus the perpetual Round is carried on. Did they but follow the Dictates of Nature, go to Bed for some Days with a light Vegetable, or no Supper at all, and bear the Inconveniencies thence arising, their Appetites would come in due Season, and they would quickly find the Truth of the Aphorism of the *Schola Salernitana*.

*Somnus ut fit levis, fit tibi cæna brevis.*

The Seasons for Sleeping and Watching, which Nature seems to point out to us, at least in these our Climates near the Tropic, are the Vicissitudes of Day and Night. Those Damps, Vapours and Exhalations, that are drawn up into the higher Regions, and are so rarefied by the Heat and Action of the Sun, as to become innocent, or very weak in the Day-time, are condensed, sink low, near the Surface of the Earth, and are perpetually dropping down in the Night-season, and consequently must be injurious to these tender Persons, that unnaturally watch in that Season, and must necessarily obstruct the Perspiration, which the Activity of Watching, and the Motion of Labour promotes. Our Bodies suck and draw into them the good and bad Qualities of the circumambient Air, through the Mouths of all the perspiratory Ducts of the Skin. And were we to view an animal Body with a proper Glass, it would appear with an Atmosphere quite round it, like the Steam of a Boiling Pot. Now we may easily conceive what Injury a Constitution may receive, not only by stopping such a perpetual Discharge of Superfluities, but also by forcing into the Habit, by the Air's Weight and Pressure, those noxious Fumes and Vapours, that are perpetually falling near the Surface of the Earth in the Night-time. Your true Topers are so sensible of this, that, by Observation, they have gathered it to be more safe for their Health, and better for prolonging their Lives, to get drunk betimes and go to Bed, than to sit up and be sober.

On the contrary, the Heat of the Sun in the Day-time, by its Action on human Bodies, the very Light, and free Air, and the Motions of Things about us, disturbing the Quiet of the Air, must necessarily disorder the equable Course of the Perspiration, the Tenor of the secondary Concoctions, and the Tranquillity of the Spirits, so necessary to Rest and Quiet. So that nothing seems more directly pointed out to us by Nature, than the Day for Labour, and the Night for Rest: And this without taking in the Consideration of the Necessity of the Sun's Light for the Ends of Labour, and providing the Necessaries of Life. Some Animals that are exceeding tender, are directed by Nature to alternate Periods of Watching and Rest, not twice in twenty four Hours, but twice in the Year, as Summer and Winter; such as Swallows, Bats, and many Sorts of Insects, who sleep all the Winter, and watch all the Summer. So consistent is Nature, in appointing the brightest and most enlightened Parts of our Lives for Action, and the darkest and most inclement for Rest. Not but that robust Constitutions (as well as Animals fitted by Nature for different Ways of Living) may, by Custom, get the better of these natural Appointments: But I write for the Valetudinary, the Studious and the Contemplative.

I advise all such, if they would preserve their Health, and lengthen out their Days, to avoid, as much as is possible, Evening Dews, Nocturnal Studies, and unseasonable Watching; in Summer to go to Bed with the Sun, and in Winter to rise, at least, by Break of Day. Those who live temperately, will necessarily sleep but little: But to recompense that, their Sleep will be much more sound, refreshing, and fruitful of Cheerfulness and free Spirits, than that of those who live more freely. For, as I have before said, the Quantity of Sleep will always be in Proportion to the Quantity of Eating and Drinking. Valetudinary, Studious, and Contemplative People, ought to go to Bed by eight, nine, or ten, at farthest, and rise by four, five, or six, by which they will have eight Hours a-bed, and that is sufficient for any Person, not under an acute, or the sharp Fits of a chronical Dilemper.

Nothing can be more prejudicial to tender Constitutions, studious and contemplative Persons, than lying long a-bed, or lolling and soaking in Sheets, any Time after one is distinctly awake, or has slept a due and reasonable Time. It necessarily thickens the Juices, enervates the Solids, and weakens the Constitution. A free open Air is a Kind of a cold Bath, especially after rising out of a warm Bed; and consequently, makes the Circulation brisker and more complete, and braces up the Solids, which lying a-bed dissolves and soaks in Moisture. The erect Posture, and the Activity of Watching, make the Perspiration more plentiful, and the gross Evacuations more readily thrown off. This is evident from the Appetite and Hunger those that rise early feel

beyond that which they get by lying long a-bed. Add to all these the Influence of the fresh, benign, Morning Air, the retreating of all the noxious Damps and Vapours of the Night, together with the Clouds and Heaviness that are thrown upon the Brain from Sleep; and lastly, that Cheerfulness and Alacrity which is felt by the Approach or Presence of that glorious Luminary the Sun, which adds a new Force to the Heart, and a Spur to the Spirits.

All Nations and Ages have agreed, that the Morning Season is the proper Time for speculative Studies, and those Employments that most require the Faculties of the Mind. For then the Stock of the Spirits is undiminished, and in its greatest Plenty, the Head is clear and serene, the Passions are quieted and forgot, the Anxiety and Inquietude that the Digestions beget in the nervous System, in the most tender Constitutions, and the Hurry the Spirits are under after the great Meal, are settled and wrought off. I should advise, therefore, those who are of a weak relaxed State of Nerves, who are subject to hypochondriacal or hysterical Disorders, whose Professions lead them to much Use of their intellectual Faculties, or who would indulge speculative Studies, to go early to Bed, and to rise betimes, to employ their Morning Hours in these Exercises till eleven o'Clock, then to take some agreeable Breakfast of vegetable Food; to go on with their Studies and Professions till three, four, or five, as their Spirits will hold out, and then to take their great Meal of Animal Food; all the rest of the Day to throw off all Study and Thought, divert themselves agreeably in some innocent Amusement, with some gentle bodily Exercise; and as soon as the Digestion is over, to require and provide for going to Bed, without any further Supplies, except it be a Glass of fair Water, or warm Sack-Whey. But the Aged and Sickly must go sooner to Bed and lie longer, because Age and Sickness break Rest, and the stiffened and hardened Limbs of the Ancient become more pliant and relaxed by much Sleep, a supine Posture, and the Warmth of the Bed.

#### RULES FOR HEALTH AND LONG LIFE, DRAWN FROM SLEEP AND WATCHING.

1. The Valetudinary, the Sedentary, and the Studious, should eat very light, or no Suppers; if any it ought to be vegetable Food; neither ought they to go soon to Bed, after any Supper whatsoever.

2. Going to Bed on a full Stomach, and Wind and Crudities somewhere in the alimentary Passages, is the Cause of the want of due Rest, which is sound and refreshing always in Proportion to the Emptiness and Cleanness of these Passages, and their Vacation from their proper Office of Digestion; and this is the Cause of the Want of kindly and refreshing Rest, in hypochondriacal and hysterical People.

3. Watching by Night, and Sleeping by Day, is of the most pernicious Consequence to Health and long Life, and plainly contrary to the Indications of Nature and the Constitutions of our Bodies.

4. The Valetudinary, Sedentary, and Studious, ought carefully to avoid Evening Dews, Nocturnal Studies, and uneasy Watching, go to Bed by eight, nine, or ten, and rise proportionally by four, five, or six, unless actually under a Fit of Sickness.

5. Nothing is more prejudicial to tender Constitutions, than lying long a-bed, indulging a lethargic and drowsy Sleep, or lolling or loitering awake, as appears by their Heaviness, and Want of Appetite upon doing so; and their good Stomachs, Cheerfulness, and Freedom of Spirits, when they rise early. *Cheyne on Health.*

In another Treatise the above-quoted Author thus speaks with respect to Sleep.

Sleep I conceive to be caused by the Disability and Incapacity of the bodily Organs to continue and perpetuate the active, rational and voluntary Functions. Without Repair, Nutrition, and Winding up, they grow languid and unelastic. When by Labour, or the common Expence of Living, the Organs are relaxed and debilitated, there must be an alternate Cessation to repair and refit them, which is called Sleep; and accordingly we find the animal Body shortened and compressed by its own Weight, by Action, and by the Loss of its Spring against Night, and lengthened and extended again in the Morning. What hinders Sleep is the continual Action of an internal Fluid, Wind or Flatulence, acting on the internal Membranes (of which the Bowels principally consist) pricking and stimulating them, and forcing them into Action; and by the Recoil or elastic Sharpness of this internal *Aura* or *Flatus*, producing wild Cogitation, or irregular intellectual Operations. Hence it is that the Body is restless; and often there is an Endeavour to gulp, expel and throw up this Wind,



Wind ; that Medicines that force the Perspiration, as Opium, Eastern Gums, animal Salts and Spirits, Aromatics, Cordials, and Diaphoretics, procure Sleep ; and a Dose of the Gum Pills, with an Aloetic, will give a good Night, as it drives out the perspirable Matter every Way ; and Cyder, and any flatulent Food (as green Pease) will hinder it. Dreaming is but partial sleeping, for Sleep admits of all the Degrees of Quantity there are between sound undreaming Sleep and perfect healthy Waking, all the Degrees and Terms that are between a given Quantity and nothing ; and accordingly Labour, Fatigue, light Food, gentle Evacuations of all Kinds, will procure, in some Degree, undreaming Sleep ; and the more rank, high, and poignant the Aliment, the more painful and terrifying will be our Dreams ; as, on the other hand, the more mild, soft and light our Food is, the more pleasant and gentle will be our Dreams, if otherwise healthy. And old Persons, weak and sickly Constitutions, and People under acute and chronical Distempers, especially those that are called nervous and cephalic, have the wildest, most inconsistent and painful Dreams, and the most imperfect Sleep, and sometimes no Sleep at all, which is one of their greatest Miseries. I should philosophically define Sleep, a Disability or Incapacity of the material Organs, from Exinanition, Use and Expence, to continue easily much longer the intellectual Functions and voluntary Motions, without a new Repair and Winding up, in the same Manner as Hunger is caused ; and Dreaming to be only partial and imperfect Waking, by a perpetual Irritation from Flatulence and obstructed Perspiration, on the internal Nerves and Membranes, or from Pain ; and Waking to be the perfect and pleasant Pliancy of the intellectual and animal Organs, to obey the Impulse of the self-motive, self-active Spirit ; and that in this immaterial Agent there is a lower, and more ordinary and weaker Effect and Energy (or a contractile and expansive Energy) by which the animal Functions are perpetuated without Interruption ; and a higher and more intense and voluntary Degree of Agency, by which Waking, and the intellectual Operations are performed ; and it is this, that in a sound Sleep, and in a Deliquium, is suspended, and in Death both, without a new Vehicle.

#### OF PROGNOSTICS FROM SLEEP IN DISEASES.

All Sleep from which the Patient awakes not at all, or not without Difficulty, but labours under an extraordinary Drowsiness, or Propension to Sleep, is of a lethargic Kind, of which Nature is a *Coma* or *Cataphora*, a *Carus*, a *Catache* or *Catalepsis*, and *Veternus* or *Lethargy*. For our Instruction in forming Prognostics from these disorderly Kinds of Sleep, as well as from what is natural, we are to premise some Things which may be of Use to us in acquiring a just Knowledge of those soporiferous Affections. And here, first, we shall divide Sleep into natural and unnatural. Natural Sleep, according to the *Definitiones Medicæ* ascribed to *Galen*, is a Retreat, or Recourse of the Soul from its Boundaries to its Original, according to the Course of Nature ; or it is a Rest and Cessation from animal Actions. In this Sleep, the natural Heat, which was fatigued and exhausted with Labour and Watching, retires into the Viscera, and there receiving fresh Recruits from the copious Humid residing in those Parts, breaks forth with renewed Force, and rouses the Subject from Sleep. In Conformity to this Sentiment, we are told by *Hippocrates*, 6 *Epid. Sect. 4. Aph. 12.* " That in Watching the external Parts are evidently hotter, " and the internal colder ; but that the Reverse happens in " Sleep." And *Sect. 5. Aph. 28.* he observes, " That in " Sleep the Blood retires more to the inward Parts." *Galen* makes the same Observation in his Comment, when he says, " That a Person, while awake, has his exterior Parts " hottest, and the interior coldest, and that the Reverse happens to him in Sleep." And a little after, in Confirmation of the Judgment of *Hippocrates*, he adds, that in Sleep the Blood, and with it the natural Heat, retires to the inward Parts ; and, in Waking, is diffused on the Parts towards the Superficies. By this inward Recession of the natural Heat, and the consequent Refrigeration of the exterior Parts, all the Actions and Operations of the Senses are suppressed and lie dormant, the Passages of the Nerves through which the Heat is diffused outwardly, and the animal Faculties exert themselves, being obstructed by the Cold, whence, as *Galen* observes, there follows a Cessation of all the Actions of the Soul. This, then, is natural Sleep, which, as we said, is occasioned by a Retirement of the natural Heat, exhausted by Watching, to the Viscera, in order to be recruited. Hence it is that Sleep becomes customary after Meals, and, what is, also, a particular Cause of Sleep, that at such a Time a Mul-

titude of gross and humid Vapours ascending to the Head, obstruct the Passages of the Brain, by which Means the Heat is repressed and inclosed within, and rendered incapable of diffusing itself, in order to awaken the Subject, before it has accomplished an Extenuation and Excussion of those Vapours. We conclude, then, that natural Sleep is occasioned either by a Retirement of the natural Heat, dried up and exhausted by Watching, and standing in Want of the Humid to the Viscera, in order to be recruited, or from Vapours arising from the Food, and obstructing the Passages of the Brain. This last Sleep, indeed, is by some esteemed a Kind of unnatural Sleep, and it is plainly so, and so much the more, when those Vapours are more copious, as we may observe in drunken Persons, who sleep long and profoundly, from an Oppletion of the Brain with Vapours, generated by an excessive Quantity of Wine. With Relation to this Subject, we are told by *Hippocrates*, 5 *Aph. 5.* " That if a drunken Person loses " his Voice on a sudden, he dies in Convulsions, unless he " be seized with a Fever, or recovers his Voice at the Time " when a Crapula generally terminates ;" for, in such a Case, if the Wine and its Vapours be not digested and diffused by the Heat, they induce a Suffocation. Hence he had Reason to intimate, that Persons in such a Condition are relieved by the Accession of a Fever, because the febrile Heat, which is far more efficacious than the natural, digests the Vapours of the Wine.

This, then, is one of the unnatural Kinds of Sleep which Physicians call by various Names, according to the Diversity of their Causes, tho' they all come under the general Appellation of *Lethargic*. This Affection is incapable of exerting itself outwardly, but remains latent and confined within, either on Account of the Multitude of Humidities which oppress the Brain, or the Cold alone, or on both Accounts, or from mere Weakness.

That Kind of unnatural Sleep which affects the Patient in a Lethargy, is properly called *veternus* ; another Kind is what the *Greeks* call *καρὸς*, a *Carus*, and the *Arabians* *Subeth*. Besides, there are other Kinds, which take the Names of *Catache* or *Catalepsis*, or, as it is generally termed *Congelatio*, " a " Congelation," and a *Coma* or *Cataphora* ; all these are Species of unnatural Sleep, whose nature is to be examined, in order to enable us to form Predictions from them.

First, then, we will suppose that all who are affected with an unnatural Sleep, are said to be *comatus*, or *veternous* (*Lethargic*). *Galen* in 3 *Epid. Com. 1. T. 7.* calls them *comatus*, who have a strong Inclination or a Propension to Sleep. He calls it a *Propension to Sleep*, when the Patients are unable to watch, or remain with their Eyes open, but keep them winking or twinkling. And in his Comment on 2 *Aph. 3.* he calls a *Coma* a long Sleep, from which it is difficult to awake ; and this Difficulty of Awakening, is what distinguishes this Affection from a long natural Sleep, as the same Author observes, *Com. in 2. Aph. 1.* where he says, " That many " are deceived, who persuade themselves that *comatus* Affections begin with a long Sleep ; for we have said enough to " convince them, that they cannot be called a *Coma*, before they come in Conjunction with a Difficulty of " waking, and that a Sleep, which exceeds the natural " Bounds in respect of Time, but is not attended with a " Difficulty of Awakening, is rightly called, a long Sleep." We bestow therefore the Epithet of *comatus* or *lethargic* on a Sleep from which it is difficult to rouse the Patient, or such a Propension to Sleep, as keeps him with his Eyes not indeed open, but winking, and desiring to shut his Eye-lids in Hopes of Sleeping. [See the Article *COMA*.]

The Species of a *lethargic* or *veternous* Sleep, are distinguished, in that some imply no more than a *Propension to Sleep*, of which Nature are what we call a *Coma*, *Cataphora*, and a *Marcor* (preternatural Drowsiness ;) others include in their Notion not only a Propension to Sleep, but a violent Drowsiness, and an almost invincible Necessity of sleeping, as is observed in a *Lethargy*. Others again import besides, a *Congelatio* or *Deprehensio*, affecting all the Parts of the Body, which Disorder is called by the *Greeks* *Catache* and *Catalepsis*. And, in the last Place, there are others which, together with a Difficulty of awakening, and an almost invincible Necessity of sleeping, include a Deprivation of all Sense and Motion, as well as Reason, as in that lethargic Affection which the *Greeks* call *Καρός*, and the *Arabians* *Subeth*.

These lethargic Sleeps admit, also, of another Distinction, for some of them are simple and exquisitely such ; others mixed with Watchings. In this respect a *Coma* is distinguish'd into what is simply so called, and into what the *Greeks* call *κῶμα ἀγρυπνόν*, " A wakeful *Coma* ;" as they, also, call the former, *κῶμα ὑπνιδόν*, " A sleepy *Coma*." Thus we call an Affection compounded of a Lethargy and a Frenzy, by the

[ \* C c c ]

Name



Name of *Typhomania*, in which the Patients sleep, wake, and are delirious; of such a Disorder are we to understand *Hippocrates*, 3 *Epid. Sect. 3.* where he says, "That of those who laboured under Phrenies, none was outrageous, as it generally happens in such Cases, but sunk away under the Weight and Oppression of a malignant kind of *Torpor* and *Cataphora*."

Having premised these Things concerning the Differences of a *lethargic Sleep*, we proceed to enquire into the Causes. *Galen*, in 3 *Epid. Com. 1. T. 7.* assigns four Causes of a *Coma* or *Cataphora*. The first is an extraordinary Humectation of the *Par*, which is the Fountain of Sensation, (and in which *Aristotle* has rightly demonstrated that *Sleep* is produced) as it sometimes happens in Drunkenness. The second is only cold, as when it is occasioned from the Use of Narcotics. But this Cold either affects the first Original, or results from a Consumption of the natural Heat by an immoderate flameous Heat, the Consequence of which is mortal. The third Cause consists of a Complication of Heat and Moisture, from whose Concurrence, also, proceed what we call a *Comatous Sleep*. The fourth and last is a Decay of Strength; and this is the Cause of that kind of *Coma* which is observed in dying Persons, who, on account of Weakness, are not able to keep their Eye-lids open; and it is peculiar to Persons in this Circumstance, that after they have shut their Eyes, they take little or no Sleep, but lie waking, and yet have not the Power to lift up their Eye-lids. *Galen*, in 2 *Aph. 3. et de Lec. Affect. Lib. 3. Cap. 3. et de Praesag. ex Pulsibus, Lib. 4. Cap. 8.* and in many other Places, teaches that the proper Sign of Dryness is Wakefulness, of Humidity profound Sleep, and of Coldness Dotage, accompanied, also, with a profound Sleep, as appears from the Use of Narcotics. From a Humidity of the Brain, attended with a Refrigeration, proceeds a *lethargic Sleep*, and the Consequence of a Coldness and Dryness of that Part is a *Catalepsis*, that is, a *Deprehensio* [See that Article] or *Congelatio*, under which Disorder the Patients are not comatous, but keep their Eyes fixed and staring, without ever closing them.

These, then, are all the Causes which *Galen* assigns of simple or exquisite soporiferous Affections; but when these Disorders are of a complicated Nature, as for instance, when a Person under a *Coma* continues waking, and even appears delirious, there must, of Necessity, be a complicated Cause. We have observed, that there is a sleepy and a wakeful *Coma*; the Cause of the first we have already assigned, the other happens, according to *Galen*, on 2 *Aph. 1.* and *Lib. 4. de Praesag. ex Puls. Cap. 8.* when the Brain is oppressed with Heat as well as Humidities, in the same manner as when from a Mixture of hot and pituitous Humours in the Brain, there arises that Affection compounded of a Phrenzy and Lethargy, which the *Greeks* call *τυφμανία*, *Typhomania*, of which we have spoken before, and supposed to be the Case of those described by *Hippocrates*, 3 *Epid. Sect. 3.* who died under a violent *Cataphora*, after labouring for a long time under a continual *Coma* of the wakeful kind. *Galen*, in his Comment, tells us, that a wakeful *Coma* proceeds from a Putrefaction of cold Humours in the Brain; for a *Coma* proceeds from Humidity; and a Delirium from an Acrimony excited by Putrefaction.

We proceed from the Causes of the various kinds of *Sleep* to the *Prognostics* which may be drawn from them, beginning with the Natural. Now as all unnatural *Sleep* is bad, so, on the other hand, all natural *Sleep* is good and beneficial; since, as *Galen* says, *Com. in 6 Epid. Sect. 4. T. 12.* it concocts the Humours, by virtue of the Heat retiring to the inward Parts; and, as he tells us, *de Caus. Pulp. Lib. 3. Cap. 9.* by the Increase of the internal Heat, the Concoctions in the Veins and Arteries, and in the whole Animal, are highly promoted. For this Reason *Sleep* is to be avoided in the Beginning of internal Inflammations, as attracting the Matter to the inward Parts and Viscera; unless, as the same Author observes, *Com. in 4 Aph. 67.* it may be thought to prove more beneficial by concocting the Humours, than pernicious on that other Account. *Sleep* is beneficial in the Decline of a Disease, otherwise it proves mortal, as may be inferred from *Galen*, *Com. in 2 Aph. 2.* *Sleep* is known to be good and salutary, by its mitigating the Inflammation, Fever, Pain, or Delirium, which it effects whenever it concocts the morbid Matter. To this Purpose is that of *Hippocrates*, 2 *Aph.* "Sleep which increases the Pain and Un-easiness in a Disease, is mortal; but Sleep which gives some Relief is not mortal;" Nay, is rather good and serviceable in the Decline of Inflammations, Pains and Fevers; and, in short, is always salutary, as indicating a Concoction and Digestion of the Humours by the Heat, agreeably to that of *Hippocrates* in the second Aphorism of the same Book, where he says, "When *Sleep* composes a Delirium, it is a good Sign." And *Galen*, in his Comment, approves that *Sleep* which mitigates an Inflammation, Fever, Pain and

Delirium. *Sleep* is known to be good, when it appears to be profound and not turbulent; for such *Sleep*, as you read *Coac. 152.* indicates a firm Crisis. But the best kind of *Sleep* is what succeeds long Watching, and which appears to be sweet to the Patient, tho' it be of long Continuance. *Galen*, in 1 *Prorrh. et.* speaks of some who after three or four Days waking, slept a whole Day and Night, and found great Relief from it; such long *Sleep* usually proves of great Benefit to Children, and is commended in them.

We have said enough with respect to the Indications and Prognostics to be drawn from natural *Sleep*, and proceed to treat of the unnatural kinds of *Sleep*. And first we read, *Coac. 178.* τὸ καὶ ὡς παύσῃ κακόν, "A carous Disposition is on all accounts bad." For tho' in drunken Persons, as some say, *Sleep* is neither to be absolutely commended nor condemned, yet several have been known, who after a Day and Nights profound Sleep under a Debauch, have never awaked. Very justly, therefore, was it pronounced by *Hippocrates*, of such Persons, 5 *Aph. 5.* that if they be suddenly seized with an Aphony, they die in Convulsions, unless relieved by a Fever, or recover their Voice at the usual Time when a *Crapula* is solved.

But can there be any good Indication produced from comatous *Sleeps*? Most certainly, since they are frequently Forerunners of such Crises as are form'd by Hæmorrhages at the Nose, or from the Parotides, the Blood ascending to the Head. But then this favourable Judgment must be confirm'd by Signs of Concoction in the Excrements, and by other critical Signs; with relation to which it is said, 1 *Prorrh. et.* 168. "That a *Coma* and Deafness attending a Cephalalgia, end in an Eruption of an Abscess behind the Ears." And *T. 169.* "A Tension of the Hypochondrium, with a *Coma*, Restlessness, and a Cephalalgia, terminate in the Parotides."

With relation to bad kinds of *Sleep*, all which exceed the Bounds of Nature are supposed to be such, according to *Hippocrates*, 2 *Aph. 3.* where he says, "That both *Sleep* and *Watching*, if they exceed the Bounds of Nature, are bad." But with respect to *Sleep*, we are to have a special Regard to Custom, which is a second Nature. Bad, also, is all *Sleep* from which the Patient receives no Benefit, and much more that *Sleep* which leaves him in a worse State than before, for such, 2 *Aph. 1.* is pronounced mortal; and *Galen*, in his Comment thereon, tells us, "That as *Sleep* in the Decline of a Disease is of great Service, if it relieves the sick; so if it renders his State rather worse, it proves mortal." In the same Place he teaches, that *Sleep* is hurtful in Fevers, when neither the Fever nor its Symptoms are diminished, but increased or exasperated by it; or new Symptoms, as Pains and a Delirium, are excited; or when the Patient, who was delirious before his *Sleep*, perseveres in his Delirium after it; or if the *Sleep* degenerates into a *Coma*, from which it is impossible, or, at least, difficult, to rouse him. All these Aggravations proceed from the Malignity of the Humours, which being left unconcocted by the natural Heat, recur upon the Viscera, and oppress those Parts, as the above-said Author there shews.

A *Coma* in the Beginning of Diseases, as it is usually occasioned by a Redundance of Humidity oppressing and moistening the Brain, can be an Indication of no other than a severe and dangerous Distemper, since it is a manifest Sign, that the Brain begins to be injured by so great a Multitude of Humours, and if attended with some other pernicious Symptoms, proves mortal. Thus it happened in the Case of the Wife of *Olympiades*, 7 *Epid. T. 49.* who on the fifth Day being seized with a *Coma*, was insensible to Endeavours used to rouse her, and recovered not the Use of her Speech, which she had lost, nor was any way relieved, but drew her Breath in a sublime Way, [See *PNEUMO.*] through her Nostrils, all which concomitant Symptoms portended a fatal Event to the *Coma*. A *Coma*, also, appearing not in the Beginning, but at the Height of a very hot and severe Distemper, is no less fatal than if it were excited by a Decay of Strength. An Instance of this Nature we have in *Hermocrates*, 3 *Epid. Sect. 1. Aeg. 2.* on whom *Galen* thus comments: "The *Coma* which seized *Hermocrates* on the eleventh Day, was induced either by an extraordinary Refrigeration of the Brain, or an Imbecility of the Faculty; but from which soever of them it proceeds, it is extremely pernicious: For we have demonstrated, that Coldness consequent on hot and dry Disorders are incurable; but what is occasioned by Weakness, signifies that Death is very near at hand." We have already observed, that this kind of *Coma* may be known by *Galen's* Description of it, *Com. 1. in 3 Epid. T. 7.* "The Patients, he says, after they have shut their Eyes, have little or no Sleep, but lie waking, tho' unable to raise their Eye-lids." Again that *Coma* is no less mortal, as *Galen*, *Com. 1. in Prognost.* in which the Patients lie with



their Eyes staring, and never shut them, a Symptom common to those who are affected with a *Congelatio*, or *Deprehensio*. Of this Sort of *Coma*, *Galen* discourses in the Place above-quoted, in the following manner: "We ought to regard," he says, the Suspection, as *Galen* says, of the Eyes in Sleep; "for if any Part of the White of the Eye appears when the Eyelids are shut, and the same is not occasioned by a Flux of the Belly, or taking a Medicine, or the usual Custom of the Patient in sleeping, it is a pernicious Sign, and highly destructive, as indicating an Extinction of the Faculty which moves the Eye-lids." An instance to this Purpose we have in the Wife of *Theodorus*, 7 *Epid. T.* 27. of whom *Hippocrates* observes, that "Her Eyes were sunk down, and rested mostly on the lower Eye-lid, with a fixed and stupid Look, and the Whites appearing pale and discoloured, and like those of dead Persons." Such is the Aspect of those who are affected with a *Congelatio*, which Disorder is by the *Greeks* called *Catoche* or *Catochus*, and *Catalepsis*; and the Patients by *Galen* on the *Prorrhetica*, those under a *Catochus*. Of those the Author of the *Prorrh.* 96. speaks, where he says, that "A *Catochus* and an *Aphony*, attended with an *Echylis* (or an universal Faintness and Feebleness) are pernicious."

But we may be instructed to pass our Judgment upon a *Coma*, not only from the Variety of its Causes, but from other Symptoms which precede, attend, or are consequent upon it. In the first Place, from preceding Signs, as, for instance, when a *Coma* succeeds long Watching, proceeding from a very hot and dry Cause; in this Case it is deadly, as we observed in another Place, where we shewed that a Coldness consequent upon hot and dry Diseases, is mortal. For this reason, all Physicians regard a Lethargy, which succeeds a Phrensy, as a most fatal Disorder. A *Coma*, therefore, which comes upon the Patient after long Watching, except it be critical, is pernicious. In the same manner is a *Coma* to be esteemed good or bad, from the good or bad Signs which accompany it; for with other bad Symptoms it must necessarily be bad and dangerous: But when the Patient lies under a *Coma*, and at the same time continues waking, which indicates no small Degree of Malignity in the Distemper, it foreshews a difficult or dubious Crisis: And thus it is, also, when the *Coma* is attended with a Delirium. According to the Observation of *Hippocrates*, 3 *Epid. Sect. 3. Stat. Pest.* and in particular Instances, whose Cases are related in the same Book, severe and dangerous Symptoms attending a *Coma*, render it a very dangerous Disorder. Thus the Author of 1 *Prorrh.* 89. "A *Coma* with a Distortion of the Eye is bad." And *Coac.* 180. "They who in the Beginning of a Disease are comatously affected, and sweat a thin Matter, and discharge a concocted Urine; who labour under a burning Heat, succeeded by Refrigerations without a Crisis, the Heat returning after short Intervals, and who become torpid, comatous and convulsive, are in a dangerous State." And no wonder, since there is a Complication of so many formidable and deadly Symptoms. And in the following Text we read, "that comatous Sleep and extraordinary Refrigerations of the Body are mortal." But this is to be understood of a burning Fever, in which the Patients burn inwardly, and shiver with Cold outwardly; and in such Disorders a *Coma* is always destructive. In the last Place, it may very well be known what a *Coma* portends, from the Signs which appear after it; for it appears to be critical when followed by some good Excretion or Evacuation. But it seems proper to a *Coma* to portend the critical Appearance of the Parotides. Thus we read, *Coac.* 185. "That they who are oppressed with a *Coma*, Nausea, and Pain of the Hypochondria, and spit little and frequently, may expect Abscesses behind the Ears; or perhaps the *Coma* may be attended with a convulsive Disposition." Sometimes a *Coma* is the Forerunner of a Flux of the Belly. Thus we read in the same Treatise, *T.* 182. "That they who labour under a *Coma*, attended with a Lassitude and Deafness, are relieved by a critical Flux of the Belly, discharging itself in red Stools." But the Author of 1 *Prorrh.* 1. 1. which is repeated, *Coac.* 179. tells us, "That a Distillation of Blood from the Nose, under a *Coma*, is a mortal Sign." Of the same Signification, also, are all bad Evacuations and bad Symptoms appearing after a *Coma*, as portending a hard and dangerous Crisis. Thus for Instance, if a *Coma* be succeeded by Convulsions, a Delirium, Aphony, Anxiety, violent Pains of the Viscera, or other bad Symptoms, they are so far from being good Prognostics, that they portend a fatal Event. *Proffer Alpinus de Prasag. Vit. & Mort. Aegrot.*

**SONATH.** The Name of a Remedy extolled by *Paracelsus*, as excellent in Apoplexations.

**SONCHITES.** A Name for the *Hieracium*. Hawk-Weed.

## SONCHUS.

The Characters are;

The Stalks are tender and fistulous; the Heads are large; the Calyx is contracted into a Cone, when the Flowers fall off; the Seeds are either small, long and narrow; or larger and fulcated, or rough as if granulated.

*Boerhaave* mentions fifteen Sorts of *Sonchus*, which are;

1. *Sonchus*; asper; arborescens. *C. B. P.* 124. *Edit.* 2. *Hieracium*; arborescens; palustre. *C. B. P.* 127. *Edit.* 1.

2. *Sonchus*; repens; multis *Hieracium majus*. *J. B.* 2. 1017. *Raii Hist.* 1. 226. *Synop.* 71. *Tourn. Inst.* 474. *Boerhaave, Ind. A.* 84. *Hieracium*, *Offic. Hieracium majus folio Sonchi, vel Hieracium Sonchites*, *C. B. P.* 126. *Sonchus arborescens*, *Ger.* 231. *Emac.* 294. *Hieracium majus Dioscoridis*, *Ger. Emac.* 296. *Hieracium majus Sonchites*, *Park.* 788. THE GREATER HAWK-WHEEL.

It is found in the Fields, and flowers in July. The Leaves are said to be cooling, and moderately astringent, and to be good in Inflammations. The Herb, together with the Root, is said to be a good Topic for the Sting of a Scorpion. *Dale. Dioscorides.*

3. *Sonchus*; Niliacus; gigas; *Lippii*.

4. *Sonchus*; asper; non laciniatus. *C. B. P.* 123. *M. H.* 3. 360.

5. *Sonchus*; asper; laciniatus & non laciniatus. *Park.* 804. *C. B. P.* 124. *Boerb. Ind. A.* 85. *Raii Hist.* 1. 223. *Synop.* 70. *Sonchus asper*, *Offic. Ger.* 229. *Sonchus asperior*, *Ger. Emac.* 291. *Sonchus asper laciniatus folio dentis Leonis*, *Tourn. Inst.* 474. *Sonchus laciniatus spinosus*, *J. B.* 2. 1016. PRICKLY SOW-THISTLE.

This Sow-Thistle has a hollow, angular, channel'd Stalk, about two Foot high, having the lower Leaves long, stiff, and pretty much cut in, or indented about the Edge, every indenting ending in a Prickle; those which grow on the Stalks, do, as it were, encompass it with two roundish Auricles, and are less jagged than those below. The Flowers grow several together on the Tops of the Stalk, in Shape like Dandelion, but much less, and of a paler yellow Colour, the under Part of the Petala being tinged with Purple; they are set in longish scaly Calyces, and turn into Down, enclosing long thin flattish Seeds; the Root is thick, long and whitish; and the whole Plant, upon breaking, yields a milky bitter Juice. It grows every where upon Banks, and by Way-sides, and flowers in May and June. The Leaves are used. *Miller's Bot. Off.*

6. *Sonchus*; lævis; laciniatus; latifolius. *C. B. P.* 124. *Tourn. Inst.* 474. *Boerb. Ind. A.* 85. *Sonchus lævis*, *Offic. Ger.* 229. *Emac.* 292. *Park.* 805. *Raii Hist.* 1. 222. *Synop.* 70. *Sonchus laciniatus non spinosus*, *J. B.* 1015. SMOOTH SOW-THISTLE.

The smooth Sow-Thistle has hollow-channel'd Stalks, like the rough, and grows as tall; the Leaves are smooth, and free from Prickles. Those next the Stalk are cut like Dandelion into several Segments, that at the End being largest; those which grow on the Stalk seem to encompass it, and have fewer Incisions, being somewhat triangular and pointed at the End. The Flowers, Seed and Root, are much alike. This grows in the same Places with the former, and is no less frequent.

The Leaves of both the last Sorts are of the same Nature with Dandelion, being aperitive and diuretic; and good for the Gravel and Stoppage of Urine, some People boil the Leaves in Posset-Drink, and give it in Fevers. The young Shoots are eaten by some People among Salads like Lettice. They are but seldom used in the Shops. *Miller's Bot. Off.*

It has a herby saluish Taste, a little bitter, and gives a pretty deep Tincture of Red to the blue Paper. It contains a Salt, in some measure like that called *Oxyfal Diaphoreticum* by *Angelus Sala*; but in the Sow-Thistle this Salt is dissolved in a great deal of Phlegm, and united with a great deal of Sulphur. The Sal Ammoniac is found there in a very small Quantity; for,

By chymical Analysis, it yields but a little urinous Spirit, and no volatile concrete Salt; thus the Sow-Thistle is a Dissolver a little moderated; the Decoction is given to drink, to allay the Heat of the lower Belly; it facilitates the Circulation of the Humors in this Part, and removes the Obstructions by which they stagnate. *Martyn's Tournefort.*

7. *Sonchus*; lævis; laciniatus; latifolius; flore niveo. *C. B. P.* 124.

8. *Sonchus*; muralis; cymis hirsutis. *H. C. Suppl.*

9. *Sonchus*; angustifolius; maritimus. *C. B. Prodr.* 61.

10. *Sonchus*; asper; laciniatus; Creticus. *C. B. P.* 124. *Prodr.* 60. *Hieracium majus, folio Sonchi, semine incurvo*. *C. B. P.* 127. *Ghondrilla Cretica, nomine missa, semine crispo*. *J. B.* 1022.



11. *Sonchus*; *Tirgitanus*; *Papaveris hortensis folio*. *Flor.*  
2. 27. *Chandrilla Tingitana, floribus luteis, papaveris hortensis folio*. H. L. 657.

12. *Sonchus*; *lævis*; *angustifolius*. C. B. P. 124. *Sonchis affinis, Terracrepola*. J. B. 2. 1018. *Chandrillis quædam affinis, laciniata, an Trinciarella*, J. B. 2. 1021. *Hieracium annuum, foliis imis angustioribus, laciniatis, caulescentibus, glaucis & integris*. M. H. 3. 67.

13. *Sonchus*; *chondrilloides*; *altissimus*; *folio oblongo, nitido, flore luteo magno, radice repente*.

14. *Sonchus*; *lævis* in plurimas, tenuissimas lacinias divisus. C. B. P. 124. *Prodr.* 61. *Chondrilla lutea*, J. B. 1029.

15. *Sonchus*; *lævis*, in plurimas, tenuissimas, angustissimasque lacinias divisus. *Cimel. Reg. Vaill. Boerb. Ind. Alt. Plant.*

SONDARI. H. M. The Name of an East Indian Shrub, called *Frutex Indicus Baccifer, floribus umbellatis, fructu tetracocco*. It is of no Use in Medicine. *Raii Hist. Plant.*

SOPHERA. A Name for the *Senna*; *orientalis*; *fruticosa*; *Sophera dicta*.

SOPHIA CHIRURGURUM. A Name for the *Sisymbrium*; *annuum*; *Abinthii minoris folio*.

SOPHISTÆ, σοφισταί ἱεροί. These are described by *Hippocrates*, as Physicians guilty of Arrogance and Insolence to others, on a Presumption of their superior Knowledge; whereas in fact they are guilty of the most notorious Errors, and excessively ignorant.

SOPHISTICATIO. Adulteration.

SOPHRONESTERES. The *Dentes Sapientiæ*. See DENS.

SOPIENTIA. Medicines productive of Sleep, or Ease from Pain. See ANODYNA, NARCOTICA, and OPIUM.

SOPIO. An old Name for *Opium*. *Rhodi Lexicon Scribonianum*.

SOPOR. The same as CAROS, or COMA.

SOPORARIÆ ARTERIÆ. The Carotid Arteries.

SOPORIFERA. Medicines inducing Sleep.

SORA. The same as ESSERE.

SORBET. The same as SERBET.

SORBTIO. Sorbile Aliment.

SORBUS.

The Characters are;

It resembles the Pear and *Cratægus* in all Respects, except that the Leaves are pinnated as in the *Fraxinus*.

*Boerhaave* mentions two Sorts of *Sorbus*, which are;

1. *Sorbus*; *fativa*. C. B. P. 415. *Boerb. Ind. A.* 2. 248. *Tourn. Inst.* 633. *Sorbus*, *Offic. Ger.* 1287. *Emac.* 1471. *Raii Hist.* 1. 1456. *Synop.* 3. 452. J. B. 57. *Sorbus legitima*, *Park. Theat.* 1420. THE SERVICE-TREE.

This grows to be a pretty large Tree, whose Branches are clothed with winged Leaves, something like those of the Ash-tree, consisting of seven or nine serrated Pinnæ, each Leaf terminating in an odd one. It has several Clusters of five leaved white Flowers, which are followed by Fruit of the Shape and Bigness of a small Pear, growing several together on Foot-Stalks, an Inch long; they are of a greenish Colour, with a Mixture of Red, as it has been more or less exposed to the Sun; of a rough, austere, choaky Taste; but when ripe or mellow, sweet and pleasant. It is found wild in some Parts of England, as in *Staffordshire* and *Cornwall*, flowering in May, but the Fruit is not ripe till November. The Fruit is used.

It is reckoned to be very restraining and useful for all Kinds of Fluxes; but when ripe, not altogether so binding. The Fruit is seldom or never to be met with in our Markets; and therefore, for a Succedaneum, we use the *Sorbus Terminalis*. *Miller's Bot. Off.*

2. *Sorbus*; *aucuparia*. J. B. 1. 62. *Tourn. Inst.* 634. *Boerb. Ind. A.* 2. 248. *Ornus*, *Offic. Ornus sive Fraxinus sylvestris*, *Park. Theat.* 1419. *Sorbus sylvestris, sive Fraxinus Bubula*, *Ger.* 1200. *Emac.* 1473. *Sorbus sylvestris, foliis domesticæ similis*, C. B. P. 415. *Raii Hist.* 2. 1457. *Synop.* 3. 452. THE QUICKEN-TREE.

This Tree grows in mountainous and moist Places; it flowers in May, and produces ripe Fruit in September. The Fruit is said to be a very good Hydragogue, and excellent for the Scurvy. The Liquor which distils from a Wound made in this Tree, is recommended as an excellent Antiscorbutic, and as a good Remedy for Disorders of the Spleen.

SORDES AURIUM. Ear-Wax.

SORDES ULCERUM. The sordid Matter in foul and ill-digested Ulcers.

SOREX. See MUS MAJOR.

SORGHUM. A Name for the *Milium*; *arundinaceum*; *subrotundo semine*; *Sorgho nominata*.

SORNI. Mats; that is, Iron. *Turba Philosophorum*.

SORY, σόρι, α σόρι. See CHALCITIS.

\* SOSTRATI VINCULUM. A Species of Bandage described by *Galen*, in his Treatise of Bandages.

SOTEIRA, σότιρα. The Name of an Antidote described by *Paulus Ægineta*.

SOTIRELLA. The Name of a Medicine in the Form of a hard Mass, consisting of Opium and some other Narcotics, with Nutmeg, Saffron, Camphire, and Soot. It is described in the *Augustan Dispensatory*, and is directed to be put into hollow Teeth.

SOTIRELLA PARVA, is another medicinal Mass, composed of much the same Ingredients; of the same Use; and described in the same Dispensatory.

SOTSITSOU. A Name in *Boerhaave's Index Alter. Plantarum*, for the *Palma*; *Japonica*; *spinosis pediculis*; *Polypodii folio*.

SPADAM. The Name for a Species of Sword-Fish, neither used in Food or Physic. *Lemery des Drogues*.

SPADON, σπάδων. A Spasm.

SPAGIRIA, or SPAGIRICA ARS. Chymistry, or Alchymy.

SPALAX, σπάλαξ. The Animal called a Mole.

SPALT, according to *Lemery*, is a flinty heavy Stone, which is used by the Founders in fusing their Metals. It is esteemed deterfive and desiccative, externally applied.

SPANNA, for Hispana, Spanish. In *Scribonius Largus*, No. 256. the *Pix Spana*, Spanish Pitch, is an Ingredient in a *Malagma*, there directed. The same Epithet is applied to Wine, Oil, Pitch, Alum and Opium, by various Authors.

SPANACHIA, according to *Blancard*, is the same as *Spinachia*, Spinnage.

SPANDARAPUM. The same as SPARADRAPUM. *Castellus*, from *Schenckius*.

SPANPOGONES, σπανοπόγωνες, from σπανός, thin, and πώγων, the Beard. Persons whose Beards are thin, or whose Hairs fall off from their Chins, are thus called.

SPARA. A whimsical Term in *Paracelsus*, to which it is not easy to affix any Meaning. It is thus defined, *Spara Vis Mineralis ex Ilech. primæ Substantiæ ex primo ente, est pars prima ex quatuor elementatis. Elementata ista sunt Mineralia majora. Paracelsus*.

SPARADRAPUM. A Sort of Cerecloth, called, also, *Tela Gualteri*.

Take of the *Diapalma* Plaister, and Diachylon with the Gums, each one Pound; Cerufs, half a Pound; Root of Orris, finely powder'd, an Ounce and half: Melt these together, and whilst they are in Fusion, dip therein soft worn-out Linen-Rags, so that they may be covered with the Plaister on each side; then take them out, spread them, and let them dry, and render the Surfaces smooth with a Knife or Spatula. The principal Uses of these are for Issues. *Lemery Pharmacop. Univerf.*

There are two other Forms of Sparadraps in the old College Dispensatory; as the *Sparadrap* for Issues.

Take of Wax, half a Pound, Red Lead and Turpentine, each four Ounces; Cinnabar, and the Roots of Florentine Orris powder'd, each one Ounce; Musc, four Grains: Mix, and use as above.

Take Oil of Roses, half a Pound; Sheeps Suet, four Ounces; Wax, ten Ounces; Litharge, Resin of the Pine, Frankincense, and Mastich, each two Ounces; Armenian Bole, and volatile Meal, each an Ounce: Make a Plaister to be used as the preceding.

The last is, in the Old College Dispensatory, called *Tela Gualteri*.

SPARAGMOS, σπαράγμος. A Convulsion.

SPARAGUS. The same as ASPARAGUS.

SPARALLIUM. An uterine Clyster. *Rulandus*.

SPAREDIA. In *Paracelsus*, is a Ligature anointed over with the White of an Egg.

SPARGANIUM.

The Characters are;

The Flowers are male, polypetalous, herbaceous, furnished with a vast Number of Stamina, and are closely connected to the Stalk in the Form of a Globe. The Ovaries grow on the same Stalk below the above-mentioned masculine Flowers, and are crooked small Tubes like Pods, which, when ripe, become oscous, unilocular, or bilocular *Capsulæ*, filled with a farinaceous Nucleus. These Ovaries are, also, collated into Globes like Knots.

*Boerhaave* mentions two Sorts of *Sparganium*, which are;

1. *Sparganium*; *ramosum*, *Ger. Emac.* 45. C. B. P. 15. *Theat.* 28. *Park. Theat.* 1205. *Raii Hist.* 2. 1311. *Synop.* 3. 437. *Tourn. Inst.* 531. *Boerb. Ind. A.* 2. 168. *Sparganium*, *Offic.*



Offic. *Sparganium quibusdam*, J. B. 2. 541. BRANCHED BUR-REED.

It grows on the Banks of Rivers, and in marshy Places, flowering in July. The Root is recommended by *Dioscorides* as excellent against the Poison of Serpents, taken in Wine.

2. *Sparganium*; non ramosum. C. B. P. 15. *Theat.* 231. *Platanaria altera*, Dod. p. 601. *Boerb. Ind. Alt. Plant.*

SPARGANOSIS, *σπαργάνωσις*. A Milk Tumor in the Breasts. *Galen.*

SPARSI MORBI. Scatter'd Diseases. The same as Sporadic Diseases.

SPARTIUM. The Broom-Tree.

The Characters are;

It hath a pupillaceous Flower, whose Pointal, which rises from the Flower cup, afterwards becomes a short, roundish, swelling Pod, containing, for the most part, one Kidney-shaped Seed in each.

*Boerhaave* mentions three Sorts of *Spartium*, which are;

1. *Spartium*; alterum; monospermum; semine Rani simili. C. B. P. 396. *Genista Hispanica, floribus luteis parvis, monospermos, semine Rani simili.*

2. *Spartium*; tertium; flore albo. C. B. P. 396. *Genista Hispanica, floribus candidis.*

3. *Spartium*; orientale; filiquâ compressâ, glabrâ & annulatâ. T. Cor. 44. *Boerb. Ind. Alt. Plant.*

SPARTIUM is, also, a Name for several Sorts of GENISTA and SECALE.

SPARUS, *σπάρος*. The Name of a Fish found near the Sea-shore, somewhat like a Guilt-Head.

SPASMA, *σπασμα*, from *σπᾶν*, to draw. A Divulsion or Distension of the nervous Fibres of a Muscle without Laceration, or a Wound. See CONTUSA.

SPASMODES, *σπασμῶδης*. Spasmodic, or convulsive; from *σπασμός*, a Convulsion.

SPASMODICUS. The same as SPASMODES.

SPASMOLOGIA. A Treatise or Dissertation on Spasms or Convulsions.

SPASMOTICUS. The same as SPASMODICUS and SPASMODES.

SPASMUS. A Convulsion, or Spasm.

No Disorder is more terrible to human Nature, or complicated with more dreadful Symptoms, than Convulsions, which are preternatural and violent Contractions of the nervous, membranous and muscular Parts, especially of the Trunk and Limbs, arising from a spasmodic Stricture of the Membranes surrounding the spinal Marrow, and the Nerves distributed from it, and an impetuous Influx of the nervous Fluid into the Organs of Motion.

Hence appears the Difference between Convulsions and an Epilepsy; for as the primary Cause of the latter is situated in the *Pia* and *Dura Mater*, those nervous Membranes which cover the Brain and the other Parts of the Head; so, on the contrary, the Cause of Convulsions is principally to be sought for in those Membranes which surround the spinal Marrow, and the Nerves distributed from it. The Symptoms, also, of those two Disorders are different, though most of them, on account of the intimate Consent of these nervous Membranes, are found to have a great Affinity with each other: For in an Epilepsy the Patient is afflicted with an Alienation of Mind; a Depravation of the internal as well as the external Senses; a foaming of the Mouth; a clenching of the Thumbs in the Fingers; and a Forgetfulness of every Thing that happens during the Fit. But these are Symptoms different from those of Convulsions, in which there is neither an Alienation of Mind, a foaming at the Mouth, nor a clenching of the Thumbs; and if these Symptoms happen during Convulsions, they constitute the Disorder of the convulsive epileptic kind.

Convulsions, like other spasmodic Disorders, principally exert their Tyranny upon the nervous, fibrous, and membranous Parts; and as these are copiously interwoven with other muscular, glandular, cartilaginous and bony Parts, they, also, draw them into Consent, and excite violent Commotions in them. And though these violent Commotions principally affect the external Parts and Limbs, yet they sometimes penetrate to the internal Viscera, and excite terrible Disorders in them.

Convulsions attack the miserable Patients in various manners; for in some they happen suddenly, without any Signs of the approaching Disorder; whilst in others they may be foretold by some Signs: The most considerable of which are, a Refrigeration of the Extremities, especially of the Feet; or a Sense of Formication, which, also, seizes the Os Coxigis, and like a cold Vapour ascends through the Spine of the Back. The left Hypochondrium is affected with tensive and flatulent Pains, and the Patient is so obstinately costive, that neither the Flatulences nor Excrements can be discharged, whilst the

smallest Clyster-Pipe cannot be introduced into the Anus; or if it is otherwise, the Clysters and Suppositories are, by the Force of the Spasms, thrown up by Vomit along with the Excrements. The Bladder is so strongly constricted, that either none, or a very limpid and white Urine is discharged. In other Patients Convulsions are preceded by Oscitations, Pandiculations, Tremors of the whole Body; Anxieties of the Præcordia; an unequal, hard, and contracted Pulse; Cardialgias; Nauseas; Vomitings; Palpitations of the Heart; a Difficulty of Deglutition; Pains of the Head and Teeth; a Ringing of the Ears, and a Vertigo.

During the convulsive Paroxysm, the Limbs are surprisingly agitated, drawn in different Directions, distended, tossed, contorted and incurvated. Sometimes the Arms are so re-torted towards the Back, that the Patient seems to sit upon them: At other times they in vain beat the passive Air: At other Times the Legs are drawn into various Directions: Sometimes they stamp and strike the Earth hard: Sometimes the Spine of the Back is incurvated, so as to form an Arch, whilst the Breast is raised: And at other times the whole Body is stiff and immovable, as a Stone. These Agitations seize many in the very Posture in which they are, without throwing them on the Ground; whilst others, like epileptic Patients, fall suddenly down, weep, laugh, grind their Teeth, gape, hang out their Tongues, and are vertiginous. As the Gestures and Motions of convulsive Patients are very various, as we find in *M. N. C. An.* 6. *Obs.* 23. *Dec. an.* 9. *Obs.* 64. *Dec.* 2. *an.* 3. *Obs.* 77. *an.* 7. *Obs.* 135. and *Horstii Epistol.* so 'tis still far more surprising, that such Patients should frequently speak Languages they never learn'd, and like Prophets predict future Events; for which Reason they were by the Ancients accounted Demoniacs, as we are informed by *Forrestus*, in *Obs. Med. Lib.* 10. *Obs.* 56. *Schol.*

After the Paroxysm many Patients retain an incredible Languor of the whole Body and Feet; many fall into Deliriums, and a profound Sleep; and in others the Disorder is terminated by Eructations, an Explosion of Flatulences, Vomiting, and a copious Discharge of Lymph. Convulsions are frequently succeeded by an Evacuation of Mucus or Blood from the Nostrils, Uterus, or hæmorrhoidal Veins. In some, also, the Paroxysm is terminated by crying, and in numberless different manners. The Sleep of convulsive Patients is generally turbulent, and full of Dread and Terror; their Appetite unstable, and their Bodies costive; they sweat with Difficulty, and are subject to the Influence of various Passions of the Mind. The Paroxysms are sometimes longer, and sometimes shorter; and happen sometimes at longer and at other times shorter Intervals, tho' for the most Part they strictly observe the Variations of the Moon. I have known Patients in whom they have duly happened at a particular Time of the Year for a few Months, and have afterwards entirely ceased. In Women they either precede or accompany the Eruption of the Menses; and are more frequent and violent after high Feeding. They are, also, easily excited by the slightest Causes, especially by the Passions of the Mind.

Those are most subject to Convulsions whose nervous Systems are either naturally, or by any other Cause, weak; especially if their Juices are impure. Hence Convulsions are not only hereditary, but, also, sometimes handed to very remote Generations; especially if the Parents have been hypochondriac, hysteric, arthritic, subject to the Hemorrhoids, or if the Mother, when pregnant, has been inclined to violent Passions: For this Reason, Children and young Persons are more subject to Convulsions than Adults, and Women than Men. Persons of a delicate Turn of Mind, an acute Genius, and those of choleric Temperaments, are, also, more liable to them than others.

Having given the History of Convulsions, we now come to consider their Pathology. The proximate Cause, therefore, of Convulsions, is a strong and violent Stricture of the Membranes surrounding the spinal Marrow, and of the nervous Parts distributed thence. Hence 'tis obvious, that in Convulsions those Parts are only agitated, which receive their Nerves from the spinal Marrow. But since these Membranes have an intimate Communion with the Meninges of the Brain, of which they are Productions, it is easy to conceive why convulsive Motions are frequently complicated with those of the epileptic Kind, into which they, also, often degenerate.

That these Things may be the more clearly perceived, 'tis to be observed, that the spinal Marrow, like the Brain, is composed of a white, medullary, and cineritious Substance, and is continuous to the Brain. See *Hippocrates, L. de Carnibus Sect.* 3. *Galen, L. 12. de usu Partium, Cap.* 15. and *Veslingius, in Anat. Cap.* 14. This spinal Marrow is covered with one common membranous Covering, which adheres to the Spondyls of the Vertebrae; and with three proper Membranes, the innermost and second of which are Productions



from the Pia Mater, and the third from the Dura Mater. This spinal Marrow is lodg'd in the Cavities of the Vertebræ, and, according to *Vieussens*, in *Neurograph. Lib. 2. Cap. 1.* is furnished both with arterial and venous Blood-Vessels distributed through its Substance; for it receives arterial Ramifications from the vertebral Arteries, and the Trunk of the Aorta Descendens, from which the returning Blood is discharg'd through the small Veins, first into the venous Sinuses of the Vertebræ, the Veins of the Vertebræ, the *Vena Sine Pari*, other small Veins, and at last into the Vena Cava Ascendens. See *Vieussens* in the Work above quoted, *Tab. 18. Fig. 1. 2. and 3.* The principal Function of the spinal Marrow seems to be, to distribute from it various Nerves, of which there are thirty Pairs, and two spinal Nerves, by *Willis* call'd the accessory Nerves, which are distributed to the *Par Vagum*. See the same Author, *Tab. 19. Fig. 11.* These Nerves are first distributed to the Muscles of the fore and back Parts of the Neck, of the Back, Breast, superior and inferior Limbs, to the Motion of which they are subservient; then they are distributed through the internal Viscera of the Breast and Abdomen, constitute the Membranes in them, and lastly send off various considerable Ramifications to the external Muscles of the Face and Head, and contribute greatly to the Motion of these Parts.

Whoever duly compares what has been said with all the Symptoms of the Disorder, will easily discover a rational Connexion between them, and be able to assign the mechanical Cause of Convulsions. But 'tis to be observ'd, that this convulsive Irritation of the Parts may happen in a double Manner; for either the Membranes of the spinal Marrow are primarily irritated, convuls'd, and draw other Parts with which they are connected into consent; or some of these Parts are first spasmodically affected, and communicate the Convulsion to the spinal Marrow, from which it is propagated to other Parts. Hence we shall call the former of these Convulsions Idiopathic, and the latter Sympathetic.

Among the mediate Causes which dispose to this Constriction of the spinal Marrow, the most considerable are violent Passions, than which nothing is more effectual both for inducing and supporting Convulsions, especially if the Patient is expos'd to external Cold, or commits any Error in Regimen. *Henricus ab Heer*, in *Obs. 24.* gives us a memorable Instance of violent Convulsions produced by a sudden Constriction of Mind, occasioned by a Reflexion upon Fornication before committed. And nothing is more frequent than for Persons, especially such as are young, to be seized with Convulsions by Frights, or excessive Passion. Immoderate or premature Venery are, also, of great Efficacy in exciting Convulsions; for which Reason Coition is call'd by Physicians, a slight Epilepsy.

Among the material Causes of Convulsions, we may justly reckon a peccant State of the Juices, and especially a certain, acrid, saline, and scorbutic Dyscrasy of them. Hence Convulsions are frequently produced by a Retropulsion of the Gout, arthritic Disorders, the Itch and Purples; and the Convulsions are again mitigated upon the Eruption of the peccant Matter. But as nothing more contributes to the Impurity of the Humours, than the Redundance or Spissitude of them, especially if the natural Excretions by Sweat or Stool, or the Hemorrhoids, or Meneses, are diminished or suppressed. Hence 'tis obvious, why hysteric and hypochondriac Patients, and those afflicted with an Obstruction of the Meneses or Hemorrhoids, are most subject to Convulsions. Hence 'tis frequently observed, that Girls before the Eruption of their Meneses, are often afflicted with Convulsions, which often cease upon the Appearance of that Evacuation.

If we enquire into those nervous Parts from which the convulsive Strictures are generally propagated to the Membranes of the spinal Marrow, the most considerable of them are found to be the Stomach and Intestines, the Vellications of which prove the Cause of Convulsions through the whole nervous System; for these Parts, by Means of their nerveo-membranous Structure, are very susceptible of irregular Motions, and are greatly affected by the slightest Cause. But since the Stomach receives its Nerves first from the right and left external Ramifications of the eighth Pair, and likewise from the Nerves arising from the first and second Vertebræ of the Back, and running off to the costal Ramification; and since the Intestines receive their nervous Branches from the internal Ramification of the eighth Pair, which concurs with the Intercostal, and forms the mesenteric Plexus, the Reason is obvious, why the Strictures of these Parts are easily propagated to the Membranes of the spinal Marrow, and the whole nervous System.

Hence no Species of Convulsions are more frequent than those which have their primary Seat in the *Duodenum*, in which acid and viscid Crudities mixing with the Bile and pancreatic Juice, quickly acquire an acrid and almost cau-

stic Nature. Thus in *M. N. C. Dec. 3. an. 3. Obs. 138.* we have a memorable Account of a Catalepsis, accompanied with violent Symptoms, the Cause of which was lodg'd in the *Primæ Viæ*. Hence, also, acid, caustic, and poisonous Substances, by corroding the Membranes, excite universal Convulsions. Thus in *M. N. C. Dec. 3. an. 4. Obs. 30.* there is an Instance in which universal Convulsions were produced by drinking Wine edulcorated with Litharge. And 'tis sufficiently known, that acrid Purgatives have often produc'd the same Effect. All these will the more easily and infallibly happen, if a scorbutic Disposition of the Patient concurs. Hence in *M. N. C. Obs. 77. Dec. 2. An. 3.* we have an Account of violent epileptic Convulsions arising from the imprudent Injection of an acrid Clyster in scorbutic Pains of the Belly.

This is, also, confirmed by various Observations of impartial Authors, in which 'tis evinced, that Worms in the Intestines have produced surprizing ambulatory and rotatory Convulsions, especially in Children. Memorable Instances of this Kind are found in *Georgius Horstius Epist. Medicin. Sect. 3. M. N. C. Dec. 1. An. 6. Obs. 187.* and *Dec. 3. An. 3. Obs. 99.* and *Forellus* in *Obs. Med. L. 10. Obs. 117.* If we enquire into the Causes of these Convulsions, we shall find, that they not only consist in Corrosions and Vellications of the Intestines, which happen to Children, but that they are, also, produc'd in Adults, by dead Worms in the Intestines, which diffuse a putrid vapour, which insinuates itself into the nervous System. Hence, in Cases of this Kind, the Breath is often fetid and cadaverous.

But since the urinary Bladder and Uterus receive their nervous Ramifications from the lowest Branches of the internal eighth Pair, and from some Ramifications arising from the Os Sacrum, 'tis easy to conceive why Vellications, Spasms, and Wounds of these Parts terminate in Convulsions. Thus, according to *Ettmuller*, in *Coll. Pract. p. 2. Tom. 1.* there are numberless Instances of Convulsions produced by a Suppression of Urine. 'Tis, also, frequently observ'd, that Women in Labour are seiz'd with peculiar convulsive Motions of the Limbs, when the Spasms of the Uterus ascend and affect the Nerves of the spinal Marrow. Hence the Hands and Neck are often agitated from one Side to another, the Breast is elevated, the Members and whole Body tremble; and unless those Spasms are allay'd and again deriv'd downwards, in order to expel the Fœtus, they often prove prejudicial, and even mortal, both to the Mother and Infant; for though 'tis certain, that there can be no Delivery without spasmodic and convulsive Motions, yet 'tis to be observ'd, that their Seat ought to be principally in the Uterus, Os Sacrum, and adjacent Muscles. But when from various Causes they are propagated to the superior Parts, and invade the superior Part of the spinal Marrow, they excite various and terrible Symptoms.

External Wounds of the spinal Marrow, and other remote nervous Parts, also, produce violent Convulsions. Every Surgeon knows, that Fractures and Luxations of the Vertebræ, where bony Splints prick the spinal Marrow, excite Convulsions: And every one knows, that Wounds of the nervous Parts, or of a single Nerve, by Venesection, for Instance, or any Puncture, Vellication, or any Cause whatever, produce violent Convulsions. *Rhodius* in *Obs. Cent. 1. Obs. 32.* and *50.* gives us Instances of Convulsions produced by a Puncture of a Nerve in the Hand. *Forellus* in *Obs. Lib. 10. Obs. 118. 119.* informs us, that Convulsions were produced by the pricking of a Nerve in Venesection. And in *Obs. 120.* he informs us, that the like Effects was produced by a Wound. And *Rhodius*, in the Part above quoted, informs us, that violent Convulsions have sometimes been produc'd by an incautious Pairing of the Nails. Hence Punctures, Wounds, and Injuries of some of the external Parts of the Head and Muscles, are found to terminate in Convulsions, which I have seen excited by a Wound of the temporal Muscle. Nor is this to be wonder'd at, since, according to *Vieussens* in *Neurograph. Tab. 24.* from the second vertebral Nerve, some Ramifications distributed upwards through the external Ear enter various Muscles of the Face.

The same is, also, the Reason of the Convulsions produced by the Stings of various Animals. In *M. N. C. Dec. 1. An. 9. Obs. 65.* we have an Account of a surprizing Species of Convulsions produced by the Bite of a large Fly. Many skilful Physicians have given us Instances of intense Pains of the Limbs, Agitations, and Incurvations of the Back, and Tossings, accompanied with a disordered Fancy, produc'd by the Bites and Stings of enraged Animals. Hence 'tis obvious, that the Matter is very small and pernicious, which excites such Tumults and irregular Motions in the whole nervous System.

Though



Though Convulsions are very terrible, yet they are not suddenly mortal. When they are recent, the Patient young, and the Constitution sound, an easy and short Cure is to be hop'd for: But if they arise from a Suppression of the Menfes or Hemorrhoids, they are removed by recalling these Evacuations. But when the Humours are thick and impure, the Excretions suppress'd, the Constitution delicate, the Patient advanced in Years, and the Disease hereditary, and of long standing, the Cure is very difficult; for then the Fluids are not only peccant, but, also, the solid nervous Parts, in which the acrid exhal'd Matter is impacted and radicated. Besides, the Nerves when greatly distended with violent Concussions, instead of the subtle, ethereal, nervous Fluid, are fill'd with a gross Vapour, and for that Reason not without great Difficulty reduc'd to their natural State. Hence, also, we are to account for the surprizing Strength of Persons under convulsive Paroxysms. Convulsions, also, frequently degenerate into a true Epilepsy, or a hypocondriac Melancholy, especially when a bad Regimen, or a preposterous Cure concur. Lastly, those who die of Convulsions are taken off by an Apoplexy. Hence on dissecting the Carcasses of these who have died of Convulsions, the Vessels of the Brain have been found infarcted and distended with stagnant Blood; or Extravasations of Blood have been found here and there in the Ventricles of the Brain, and in the spinal Marrow.

In the Cure of convulsive Motions, three Intensions are to be principally pursued; the first of which is, to correct the material Causes which support the Disorder, prepare them for an Elimination, and commodiously evacuate them. The second is, to sooth and allay the violent and irregular Commotions of the nervous Parts. And, thirdly, to corroborate the nervous System, in order to prevent a Relapse, which frequently happens. But the Patient, especially if the Disorder is inveterate, is above all things to be exhorted to Patience under the Cure for some Time; nor is the Cure to be obtain'd by a great Variety of drastic Remedies, but rather by mild Medicines, and such as are friendly to Nature; these, with the Assistance of Patience and a sufficient Time, will accomplish the Cure.

With respect to the Cure in general, 'tis to be observ'd, that if the Disorder, according to *Hippocrates*, arises from a Redundance of Humours; or if the Quantity of Blood is too great; or if it is thick, and the Pulse large, and especially if the Habit is sanguineous, we are to begin the Cure with Venesection either in the Foot or Arm; and these Venesections are to be repeated twice, thrice, or oftener, according to the Degree of the Plethora; or Scarifications may be interpos'd; but Venesection is more expedient after, than during the Paroxysm; for by bleeding in the Paroxysm, I have frequently observ'd violent and long protracted Symptoms produced.

I have, also, very rarely observ'd convulsive Motions remov'd without the Observation of a proper Regimen. Hence in inveterate Convulsions it is expedient to change the Air and Soil, especially if dank and moist, and to reside in a serene and mild Air; to travel and use frequent Exercise; proper Aliments, of a soft Texture and easy Digestion, are to be chosen; but all hot, spirituous, vinous, and Malt Liquors are to be carefully avoided. The Patient is, for ordinary Drink, to use Decoctions of the Root of Viper's Grass and Shavings of Hartshorn, or Whey, or the *Selteran* cold Springs. Baths for the Feet, prepared of River-water, Bran, and Chamomile Flowers are, also, to be us'd; and the Patient is to immerse his Legs pretty far into them when they are considerably tepid, before going to Bed, after which he is to procure a gentle Sweat; for these Measures have a singular Efficacy in promoting the Circulation of the Humours, and allaying the spasmodic Strictures.

But no Attempts towards a Cure are to be made, unless the Body is soluble; for which Reason, if the Patient is costive, we may exhibit a proper Dose of the *Pilula Balsamica*, or Infusions and Potions prepared with Manna, or Manna us'd instead of Sugar in some warm Infusion; or if the Patient is entirely costive, emollient and oleous Clysters are to be injected till the Body is duly soluble. But when 'tis certain that the Fomes of the Disorder is lodg'd in the *Primæ Viæ*, 'tis expedient, especially about the Changes of the Moon, to exhibit an Emetic in Conjunction with a Laxative, for which Purpose two or three Grains of emetic Tartar may be mixed with a Decoction prepared of one Ounce of Manna, that thus there may be a sufficient Evacuation of the peccant Humours both by Vomit and Stool.

Among the most simple and dietetic Medicines which are generally of great Service in convulsive Disorders, we may justly reckon large Draughts of cold and simple Water, by which Means I have seen the most violent Convulsions remov'd; for common Water, in consequence of its Levity and Fluidity, enters the capillary Vessels of the human Body,

renders the Blood more fluid, corroborates the Parts, involves the acrid and sulphureous Humours and Vapours, and by exciting a gentle Sweat, eliminates them from the Body. Hence the proper and moderate Use of temperate, cold, and hot Springs, seems to be of singular Efficacy in convulsive Disorders.

But if Convulsions, especially about the State of Puberty or Youth, arise from excessive Venery, Anger, or any other Commotions of Mind, the Patient is carefully to abstain from every thing capable of producing a Commotion and Orgasm in the Fluids, or exciting the Solids to preternatural Motions and violent Strictures, such as Aromatics, acrid Purgatives, Emetics, all hot and spirituous Substances, violent Exercises of Body and Mind. On the contrary, greater Confidence is to be repos'd in Diuretics, emollient, demulcent, and nutritive Substances. Hence Cows Milk, that of Ases, or Whey, as, also, Baths of sweet Water mix'd with Milk, are of singular Service. Gelatinous, nutritive Broths, are, also, of great Service; and for ordinary Drink, the Patient is to use weak Chocolate, or Decoctions prepared of the Roots of Vipers-Grass, Barley, the Shavings of Hartshorn and Ivory, and the Flesh of Vipers. To these we are to add such Remedies as allay spasmodic Motions, together with Anodynes and Specifics, which are hereafter mentioned.

When Convulsions arise from Worms, these are to be kill'd and expell'd from the Body: But 'tis to be observ'd, that in this Case all Anthelminthics and Specifics are not equally proper; since the Preparations of Garlick, Vitriol, Copper, Aloes, drastic Purgatives, and Mercurials destroy Worms, they are nevertheless unfriendly to the nervous Parts when rashly exhibited. It is more expedient to attempt the Cure by external Remedies, such as Clysters of Milk, those prepared of sweet and oleous Substances, and Liniments of a purgative Quality, such as the Ointment of Sow-Bread, externally applied to the Navel and Abdomen. The Anthelminthics given internally ought to possess a corroborative and nervous Quality, such as Worm-seed, either reduc'd to Powder or an aqueous Essence, or Mercurius Dulcis mix'd with two Parts of medicinal Cinnabar, and reduc'd to the Form of Pills, with Extract of Tansy, Rhubarb, and the lesser Centaury. Other peccant, bilious, viscid, and acrid Sordes of the *Primæ Viæ*, are to be treated with inciding, resolvent, absorbent, digestive Medicines, such as correct Acrimony, and gentle Evacuants, either of the emetic or laxative Kind. If acrid Purgatives, or Things of a caustic or poisonous Quality have excited the Convulsions, the *Spiculæ* of these Substances are to be sheath'd up by pinguis, oleous, mucilaginous Substances, and Preparations of Milk.

If Convulsions are supported by a Suppression of the Menfes, we are by no Means to recal that Evacuation by Emmenagogues, and other hot Medicines generally exhibited for that Purpose. In such a Case, 'tis more expedient to restore the free Circulation of the Humours by the Use of Baths of natural and medicinal Waters, by prudent Venesection, by bathing the Feet with tepid Liquors, by balsamic Pills, by warm Infusions of the Leaves of Baum and the Lime-Tree, and by correcting Powders. Then the irregular Motions of the solid Parts are to be allay'd by Antispasmodics and Anodynes, such as the anodyne Liquor mix'd with Essence of Castor, which is an excellent Medicine; then the weaken'd Parts are to be corroborated. When Convulsions arise from a Suppression or Diminution of the *Menfes*, besides the above specified Remedies and Venesection, the Application of Leeches to the *Anus* is of singular Service.

It frequently happens, that the Retropulsion of Sweats, of ulcerous Excretions, of the Itch, Purples or Gout, induces Convulsions. In this Case, the acrimonious Sordes of the *Primæ Viæ* are to be corrected, and the spasmodic Strictures allay'd by absorbent Powders prepar'd of Crabs Eyes, the *Pulvis Marchionis*, prepar'd Amber, Cinnabar, Nitre, diaphoretic Antimony, and the Extracts of Saffron and Castor. In the Evening the Patient may take the anodyne Liquor, with a small Dose of *Buffini's* bezoardic Spirit, and the Spirit of Castor, or antispasmodic Pills prepar'd thus:

Take of the Extracts of Yarrow, and of the Flowers of Chamomile, and the Herb *Carduus Benedictus*, each one Dram; of *Venice Treacle*, Amber, and Cinnabar, each half a Dram; of Saffron, twelve Grains; and Oil of Chamomile, eight Drops; form them into Pills, with which Laxatives are to be frequently interpos'd.

Then Ases Milk mixed with the *Selteran* cold Springs are to be drank, or Whey, both of which are to be persisted in for some Weeks, interposing, at proper Intervals, Manna in conjunction with Cream of Tartar.



If, when by these Means, the material and especially the grosser Causes are removed, convulsive Motions should still remain, they are to be treated with such Medicines as allay exorbitant Motions, and with Specifics opposite to the subtle sulphureous Vapour which is impacted in the Nerves, and is the principal Support of the Disorder. To this Class principally belong antispasmodic and antiepileptic Specifics, taken from the animal Kingdom; for these, by their Fragrance immediately perceived by the Smell, are opposite to the fetid Vapours which support the Convulsions, and by a specific Virtue subdue them. The most considerable of this Kind, are the Shavings of the Sea-horse's Teeth, of Ivory, of the Bone found in the Head of the Sea-cow, of the Elk's Hoof, and of the human *Cranium*, as also human Blood and Secundines dried, the Viscera of Vipers and Serpents, together with their Hearts, Galls, and Liver; the Ankle Bones of Hares dried and pulverized, the Water of Swallows with Castor, but especially the Powder of Earth-worms. No less efficacious are some Medicines drawn from the vegetable and mineral Kingdoms, among which are the Coals of the Lime-tree pounded, the Extract of Saffron, the Flowers and Roots of Piony and wild Poppies, as also Medicinal Cinnabar. This Intention is, also, answered by Sedatives and Anodynes, such as the anodyne Liquor mixed with Essence of Castor, the Pilulæ de Cynoglossio mixed with *Aurum Fulminans* and Cinnabar, and the *Pilulæ Hildegansii*, which, when the grosser Matter is removed, excellently check habitual convulsive Motions. And lastly, Corroboratives are to be used, in order to answer the third Intention of Cure.

Nor are we to neglect external Remedies, among which we may reckon Ointments and Liniments applied to the Nape of the Neck, and Spine of the Back. The Ingredients of these may be that of human Fat, Badgers, Bears, the Mountain Mouse, the Beaver, and Vipers. With these Fats we are to mix the distilled Oils of Rue, Lavander, Marjoram, Rosemary, Nutmeg, and, in order to render them more penetrating, a few Drops of the Spirit of volatile Salammoniac. But 'tis to be observed, that the distilled Oils are to be omitted in Patients who cannot bear them, and only the Fats and mucilaginous Substances used. No Medicine is preferable to Baths of fresh Water used about the Time of the Invasion. By these let a gentle Sweat be provoked, Nature being either spontaneously inclined to it, or, if not, by an Infusion of the Flowers of the Lime-tree, which are of singular Efficacy, of Cowslips, St. John's-wort, and Valerian Root, by which means, violent Paroxysms are frequently prevented.

When in Convulsions arising from Worms, Mercurius Dulcis is exhibited with a purgative, 'tis to be observed, that before the Use of this Medicine, or other Anthelmintics, mucilaginous Demulcents, such as a few Spoonfuls of the Oil of Sweet-almonds, are to be exhibited; or let Milk be drank immediately before or after, in order to allay the Strictures of the Intestines.

Tho' Venesection is often beneficial in convulsive Disorders, especially where there is a Plethora, a Spissitude or Dyteraty of the Humours, a Suppression of the Menfes or Hemorrhoids, or when the Head is violently affected, yet we are not to take away a large Quantity of Blood at one Time, nor to use Venesection promiscuously; for as the Disorder, when often recurring, more frequently proceeds from a Defect than a Redundance of laudable Blood, it easily happens, that by immoderate Venesection the Strength is impaired, the Stomach weakened, Perspiration retarded, and in Patients not manifestly plethoric, more Harm than Good done. Nor is Venesection to be performed on the Side affected, nor during the Equinoxes, but about fourteen Days before or after them; because at these Times the Paroxysms, during which nothing is to be attempted, are generally more violent than at other Seasons.

When a Suppression of the Hemorrhoids supports Convulsions, and a gentle Tumor and Obstruction of the Vessels are already formed, after other proper Measures, I know no more efficacious Medicine than Chalybeats. Hence the following vinous Infusion is of singular Service.

Take of the Roots of Zedoary and Succory, each half an Ounce; of the Tops of the Lesser Centaury, and the Flowers of Clary, each four Pugils; of recent Citron Peel, half an Ounce; of Currans, two Ounces; and of Rhenish Wine one Quart; mix all together, digest over a gentle Fire, and keep for Use.

In convulsive Disorders no Medicines are more prejudicial than such as throw the Humours into violent Commotions, to which they are at these Times too much subject. Hence we are carefully to abstain from all hot spirituous volatile Substances, hot Tinctures and Essences, crude Astringents and

Narcotics, which not only recal the Paroxysms, but also render the Disorder worse and more obstinate.

We are not rashly and immediately to have Recourse to Baths, which are not to be used, so long as the Patient is plethoric, or the *Duodenum* full of Sordes; for in such Cases, 'tis to be feared that the malignant Matter, being put in Agitation by the Baths, should be diffused thro' the whole Body. The same Caution is to be observed with respect to a Milk-Diet, instead of which bilious Patients ought to use Whey; nor is a Milk-Diet to be used at all, unless the *Primæ Viæ* and Viscera are sound and free from Sordes. A Course of Milk is most safely begun about the Middle or End of the Spring.

The Body in convulsive Disorders ought always to be kept soluble, since we observe them to be most violent when the Patient is costive. This Intention is best answered by mild laxative Preparations of Rhubarb, Raisins and Manna, Clysters, and an emollient Diet. Tho' Liniments are of singular Efficacy in soothing and relaxing Spasms, yet they are more properly used when the Paroxysm begins to remit, than at its Height, especially if the Patient has previously used the Bath.

Antiepileptic Specifics and spirituous Corroboratives are by no Means to be exhibited in the Beginning of the Disorder, and not till after the material and gross Cause is removed; for when this Cause is removed, convulsive Motions frequently cease, without the Assistance of Specifics, whose Efficacy is found to be greatest in Convulsions arising from Commotions of Mind, especially if the Viscera are sound. Thus I knew a young Man, who for sixteen Years had laboured under violent epileptic Fits, happily cured by my antiepileptic Powder, after having previously taken a Vomit.

The Return of Convulsions is best prevented by a due Use of the Non-naturals. Let the Patient, for Instance, live in a pure, serene and temperate Air. And as *Hippocrates*, in *Secl. 2. Aph. 45.* affirms, that in young Persons, Convulsions are cured by Change of Air, so the Patient is to be persuaded to remove from marshy, cold, and moist Places, infected with a thick and coarse Air, to higher, dryer and more healthy Parts. The Patient must not lie on the moist Ground, nor walk long in a bad Air, in the Night-time, or when the Sun shines excessively hot. Let his Food be of easy Digestion, and for ordinary Drink, let him use cold or medicated Water, or warm Infusions. He ought to preserve a serene Mind, abstain from immoderate Venery, use Exercise, take a good deal of Sleep, preserve his Body soluble, and, lest a Redundance of Blood should happen, use proper Venesections or Scarifications. *Frederic Hoffman.*

SPASNIA. A violent lancinating Pain in the Muscles of the *Thorax* during Coughing. *Castellus* from *Mercurialis*.

SPATHA. *σπάθη*. This sometimes imports a Rib, or a Scapula; but it is generally used to express a *Spatula*, an Instrument well known in Apothecaries Shops. *Spatha*, in *Celsus*, *L. 7. C. 10.* is a Sort of Incision Knife, the Shape of which *Heister* thinks is not known. *Celsus*, speaking of a *Polypus* in the Nose, says it must be loosened from the Bone by a sharp Iron Instrument, *in modum Spathe facta*, shap'd lik'd a Sword; for *Spatha*, *σπάθη*, signifies, properly, a Sort of Sword; whence all the other Things which are thus called, borrow the Name on account of their Similitude. *Spatha*, *σπάθη*, is, also, the external Covering of the Fruit of the Palm.

SPATHESTER. *σπαθηστήρ*. from *σπάω*, to draw. A Chirurgical Instrument, contrived for drawing the Prepuce over the Glans, when too short to cover it.

SPATHOMELE. *σπαθομήλη*. A *Spatula*.

SPATILE. *σπαλίλη*. A liquid Stool.

SPATULA. An Instrument for mixing and spreading Plaisters, and for many other Uses.

SPATULA FÆTIDA. See XYRIS.

SPAUL. Blood. *Rulandus*.

SPECARIUM. The same as LAPIS SPECULARIS.

SPECIES, in Pharmacy, is a Powder.

The Species usually prepared are the following.

Species *Diambræ cum & sine Oleratis*. See DIAMBRÆ SPECIES.

SPECIES DIANTHIUS. See DIANTHON.

SPECIES DIATRAGACANTHI FRIGIDI. See DIATRAGACANTHI FRIGIDÆ SPECIES.

SPECIES DIATRION PIPERIS. See DIATRION PIPERIS SPECIES.

SPECIES HIERÆ PICRÆ. See HIERA.

Besides the foregoing Species, *Schradet* mentions the following:

Species *Dianthu*.

contra Apoplexiam.

Aromaticæ *Caryophyllatæ cum & sine ambra & Moscho*.

Aromaticæ *Rosatæ cum & sine Ambra & Moscho*.

Species



Species Diacalaminthes.  
 Cephalicæ.  
 Diacinnamomi.  
 Diacorallii.  
 Confectionis Cordialis.  
 Cordiales cum & sine Ambra & Moscho.  
 Diacubearum.  
 Diacurcuma five Diacrocu.  
 Diagalanga.  
 de Gemmis calidæ, cum & sine Ambra & Moscho.  
 de Gemmis frigidæ.  
 Ducis five Electuarii Ducis.  
 de Hyacintho.  
 Diahyssopu.  
 Imperatoris.  
 Diaireos Salom.  
     Simplex.  
     Usitata.  
 Justinii five Electuarii Justinii.  
 Dialacca.  
 Lætificantes Galen. cum & sine Ambra & Moscho.  
 Lætificantes Rhafis.  
 Liberantes, confectionis liberant.  
 Lithontribon.  
 Diamargariton calidæ Avicen.  
 Diamargariton frigidæ Nicolai.  
 Diamoschu Amaræ.  
     dulcis cum & sine Ambra & Moscho.  
 Diapenidion.  
 contra Pestem, Ferdinandi Imper.  
 Diapleres archonticon, cum & sine Moscho.  
 Diapœonias, cum & sine Ambra & Moscho, Cord.  
 Benedictæ Laxativæ.  
 Diacarthamu.  
 Caryocostini.  
 Episcopi, five Elefscophi.  
 de Succo Rosarum.  
 Diaturbith cum Rhubarbaro.  
 Diapraßiu Nicolai.  
 Electuarii Resumptivi.  
 Diarrhodon Abbatis, cum & sine Moscho.  
 Rosatæ novellæ.  
 Diaspoliticon.  
 Diatrion Santalon.  
 Diathamaron, cum & sine Moscho.  
 Diatrogacanthæ calidæ.  
 ad Vermes, Confectio ad Vermes.  
 Dia-Xyloaloës, cum & sine Ambra & Moscho.  
 Dia Zingiberis.

## SPECIFICA. Specifics.

Since 'tis certain from Experience, that some Medicines have a Kind of peculiar and specific Efficacy in the Cure of particular Disorders, and are for that Reason preferable to others, I shall consider some of those Medicines, which, from long Experience, I have found in a singular Manner beneficial in the Cure of certain Diseases. But by *Specifics* I do not, with the common Herd of Physicians, mean such Medicines as infallibly and in all Patients produce salutary Effects, and never frustrate the Hopes of him who prescribed them. For such Medicines are no where to be found, because the Operations and Effects of Remedies are not formally inherent in them, but depend upon the mutual Action and Re-action of the Medicine upon the Body, and of the Body upon the Medicine; for all Medicines act not only according to their own Sphere of Activity, but also according to the Constitution of the Patient, so that the same Medicine, exhibited to ten different Persons labouring under the same Disorder, produces different Effects in each.

The high Pretences, therefore, to Panaceas, Arcanums and Specifics, against particular Disorders, are false and ill-grounded, since by Specifics we ought to mean no more than such Medicines as are more efficacious and infallible than others in the Cure of particular Disorders; for some Medicines contain Elements or Principles every one of which contributes to remove the Cause of the Disorder; so that the Compound, or Medicine itself, answers various Intentions of Cure at once. Thus Rhubarb is preferable to all other Laxatives in the Cure of Diarrhæas, because it not only evacuates, but also by its balsamic Bitterness, blunts and corrects the acid and caustic Humours, and when the Purging is over, corroborates the relaxed Tone of the Viscera by its earthy, subastrigent Particles. Thus, also, in Diseases of the Breast, and Coughs proceeding from Disorders of the Stomach, in order to cleanse the Primæ Viæ, Manna is preferable to all other Laxatives on account of its Sweetness, which obtunds and corrects the corrosive, acid, and acrid Humours. Other Remedies are, also, called Specifics, because their Virtues and Power of producing certain Effects in particular Diseases, have been discovered and confirmed by

long Experience. Hence the *Peruvian Bark* is a Specific for stopping the Paroxysms of Intermittents, Opium for alleviating Pain, and Mercurials for curing the Lues Venerea. Some Remedies are called Specifics, because they are more friendly than others to the Parts affected, and by their Virtue have a particular Influence upon them. Thus the Nerves, together with the nervous and membranous Parts, are happily affected by Medicines abounding with a subtle, aromatic and fragrant Oil, whereas bad Effects are produced in them by Narcotics, Opiates and Astringents. The Stomach is delighted with Acids, by Means of which Appetite and Digestion are promoted, but the Bronchia of the Lungs are injured and stimulated to Spasms by them. Cantharides, and Insects abounding with a volatile caustic Salt, neither affect the Stomach nor Intestines, but the urinary Ducts of the Kidneys, the Ureters, Bladder and Urethra, are vellicated and agitated with spasmodic Strictures by them.

Thus we are to form our Judgments of the Virtues of Specifics, which ought to be frequently used and greatly esteemed by Physicians. But we shall now consider what Specifics are appropriated and adapted to particular Disorders. With regard then to intermittent Fevers, and especially, in order to check their Paroxysms, the *Peruvian Bark* is greatly celebrated, because, besides its astringent Quality, and that by which it stops febrile Motions, which it has in common with many other Medicines, such as Preparations of Vitriol and Allum, the Roots of Tormentil and Bistort, it is, also, in Consequence of its bitter, balsamic Principle, possessed of a singular Efficacy for correcting the morbid Matter, and corroborating the languid Solids. This Bark may be exhibited in Substance, reduced to an Electuary or Essence, or, which is best of all, infused and gently boiled in *Rhenish Wine*. Among the Specifics, also, for Intermittents are generally reckoned the Flowers of common Chamomile, so much extolled by *Baglivi*, because both on Account of their Bitterness, Oil, and antispasmodic Virtue, they are highly efficacious in Fevers, and by their gentle Astringency, restore the Tone of the Solids. But if Intermittents are highly obstinate, which is generally owing to an Obstruction of the Pancreas, this Obstruction is by nothing more efficaciously removed than by *Mercurius Dulcis*, Medicinal Regulus of Antimony, and antimonial Sulphur corrected, and prudently exhibited.

In Quartans, the most celebrated Specific is the Essence of Rhubarb and Gentian, prepared with the Lixivium of the Salt of Tartar, and the urinous Spirit of Sal Ammoniac; for in Quartans, the Liver, and its Vessels, are full of gross Blood, the biliary Ducts infarcted with a thick and tough Bile, and the *Primæ Viæ* overloaded with acid Crudities: Hence this Medicine, because it corrects and sweetens the acid Humours, resolves and attenuates the stagnant Blood and lentescient Bile, restores a due balsamic Quality to the Bile, and purges gently, is preferable to all others. But when Quartans are so inveterate and obstinate as to elude the Force of all other Medicines, *Mercurius Dulcis*, or diaphoretic Mercury duly prepared, are highly efficacious; as also, the *Antiquarium of Riverius*, which is possessed of the same Virtue with Mercury. And tho' the Mercurials exhibited should excite a Salivation, yet it is not to be dreaded as dangerous, since frequently the Fever ceases whilst it succeeds.

All Inflammations, which are always accompanied with a Fever and Danger, and generally happen in the Nerveo membranous Parts, such as the Pleura and Bronchia of the Lungs, are by a certain Specific Virtue cured by purified Nitre, mixed with a small Quantity of Camphire, by Demulcents, gentle Anodynes, Emulsi ves, and fixed Diaphoretics. In extinguishing all febrile Heats, Nitre is preferable to all other Things, because, besides that Virtue by which it fixes and abates the intestine Motion of the sulphureous Parts of the Blood, it resolves and attenuates the thick Blood and Lymph lodged in the narrow Vessels, and at the same time moistens and relaxes the tense and rigid Fibres, and consequently exerts an antispasmodic Virtue.

When there is a malignant Disposition of the Humours, or such a State of the Juices as is prone to Putrefaction, or when by Contagion, such Miasmata are conveyed into the Body as are fit to induce such a putrid Corruption of the Juices both in acute and chronical Disorders, I find nothing more effectual than Camphire, especially when exhibited in Conjunction with Nitre; for the Camphire, by its balsamic Quality, preserves the due Crasis and Mixture of the Blood, diminishes the Force of the Ferment, and by augmenting Perspiration, without exciting an excessive Heat of the Blood, excellently promotes the Elimination of the Sordes, through the Pores of the Skin. But if the Fever or Inflammation are of the malignant Kind, Camphire is never to be exhibited alone, but always mixed with Nitre. In order to restore Strength, which is greatly impaired in almost all Diseases, and especially those of the malignant Kind, I know no more

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efficacious



efficacious Remedy than Citron Peel, on Account of the Oil which it contains ; as also, Cinnamon, and a weak Water distilled from it, with the fragrant Juices of Straw-berries, Rasp-berries, and Cherries. When the Fever is absent, Oil of Cinnamon, and an Elæosaccharum prepared of it, are of singular Use in restoring the Strength. In a Plague, the most malignant of all Disorders, the best Specific is Vinegar, either simple, or prepared with Alexeterial and Cordial Roots. The Juice of Lemons and Citrons, and the Syrup of Citron Juice, mixed with Oil of Cedar, as Acids, powerfully resist Putrefaction, the Source and Support of which is an exalted alcalino-sulphureous Principle tending to a corruptive Dissolution of the Humours, and a Destruction of their due Mixture.

We now come to treat of Pains, which, if they arise from spasmodic Strictures, such as the Cardialgia, the Colic and the Stone, are most surprizingly relieved by my anodyne mineral Liquor, which is not only possessed of a gently anodyne and discutient, but also of a corroborative Quality not to be found in other Sedatives. When Flatulences become stagnant, and so pent up as to distend the nervous Coats of the Stomach and Intestines with violent Gripings, I have found no more powerful Specific for their Discussion than Orange Peel, Camomile Flowers, Caraway and Cumin ; because, on account of the subtle vaporous Oil they contain, they are anodyne and mitigating, and by their bitter, aromatic, acrid and fragrant Principle, corroborative, and proper to restore the Tone of the Parts. By which Means the Crudities, which are the Cause and Fomes of the Flatulences, are afterwards commodiously eliminated.

Nor are there Specifics wanting for other Disorders. Thus scorbutic and rheumatic Pains of the Limbs, and a wandering Gout, are greatly alleviated by Earth-worms, the Juice or Powder of them, especially, when mixed with Absorbents, Cinnabar and Nitre, and long and copiously used with Asses Milk or Whey. I have, also, seen long continued rheumatic Pains and Contractions of the Limbs, cured by gradually exhibiting the Powder of crude Antimony from about ten Grains to half a Dram. Let this Medicine be taken daily, interposing a mild Decoction of the temperate Woods. Asses Milk, according to *Pliny* and *Dioscorides*, was by the Ancients looked upon as a Specific for the Gout, and frequently used ; and such gouty Patients are also surprizingly relieved by Decoctions of the Roots of Mugwort, Vipers Grass, Sarsapilla, China-root, Liquorish, Polypody and Hermodactyles, liberally and for a considerable Time used. In a Tooth-ach, an Ounce of Elder Rob drank in Broth, in order to promote a Diaphoresis, and some of the same Rob dissolved in Ale, with which the Mouth is to be frequently washed, affords infallible and present Ease to the Patient.

Hypochondriac and hysteric Disorders have a great Affinity, and principally exert their Violence by inflating and spasmodically constricting the Intestines, by which Means they draw the whole nervous System into Consent. These Disorders have, however, their peculiar Specifics, by which they are allayed, the most considerable of which are hot and cold medicinal Waters, Baths, proper Exercise, fetid Gums and Medicines, such as Asa Fœtida, Sagapnum, Opoponax and Castor, which when exhibited alone in the Form of Pills, or rather with Purgatives, such as corrected Aloes, or the Extracts of Rhubarb and black Hellebore, or mixed with Myrrh and Saffron, and frequently tho' moderately used, surprizingly allay the Spasms, corroborate the Tone of the nervous Parts, and colliquate and gently evacuate the viscid Humours.

In Disorders of the Head, and especially of the Nerves, which proceed from a Weakness of the Brain, and a languid feeble State of the whole nervous System, such as an Hemiplegy, a Palsy, a Diminution of the Senses, a Torpor and Stupor of the animal Functions, a Difficulty of Hearing, a Ringing of the Ears, a Syncope, a Vertigo, a Weakness of the Stomach and Intestines, as also a Diarrhœa and Vomiting, I have found no more infallible and instantaneous Specific than my Balsam of Life, prepared of genuine cephalic and aromatic Oils, and used both internally and externally.

Besides, for Madness, whether of the furious or melancholic Kind, not only Venesection, but, also, the Use of hot and cold medicinal Waters and Emetics are celebrated as Specifics. The Ancients, and *Hippocrates* himself, for this Purpose principally used white Hellebore, the Virulence of which, according to *Prosper Alpinus*, in *Med. Method.* they corrected by Boiling it with Oil or Oxymel, and giving the Patient a large Quantity of Milk before its Exhibition. But this Practice is now obsolete, perhaps, because the Moderns are ignorant of the Method of collecting and exhibiting Hellebore. See *Schulzii Dissert. de Helleborismo veterum*. Nor is it to be doubted but Hellebore is a Specific in Delirium and Madness, especially if its Operation is assisted by Venesection and Baths of sweet Water, which are beneficial in all Disorders of this

Kind. But in Madness arising rather from the Exorbitance of Passion, than an Obstruction of the Hypochondria, Asses Milk, Nitre, and Asses Blood dried and reduced to a Powder, are excellent Demulcents, greatly allay the excessive Strictures of the nervous Fibres, and in the Beginning of the Disorder, produce happy Effects, especially if the Patient changes his Climate, and avoids every Occasion of Passion.

The more terrible and frightful an Epilepsy is, the more solicitous Physicians have been about Remedies to remove it ; and certainly there are many Specifics extolled for this Purpose ; but I believe none are better, or more infallible, than the Powder of Earth-Worms, Cinnabar, the Powder of human Secundines, the Shavings of the human Cranium, the Elks Hoof, and human Skin. But as these are proper in an idiopathic and chronical Epilepsy, so in that of the symptomatic Kind, nothing is more efficacious than my anodyne Mineral Liquor, which greatly alleviates epileptic Fits.

When in an Asthma the vesicular and vascular Compages of the Lungs is obstructed, and infarcted with a viscid Phlegm, Gum Ammoniac, Saffron, Peruvian Balsam, and Opoponax, either reduced to Pills, or made into an Effence with Tincture of Tartar, are of all others the best Specifics : But when the Lungs are affected with any Phthisical Disorder, the best Specific is Asses Milk, either alone or mixed with the *Selteran* Waters, which are highly beneficial in Disorders of the Lungs. This Intention is, also, answered by pure distilled Sulphur, especially if dissolved with the Fat of Animals, such as Human Fat, or the recent Fat of a Dog ; as, also, with Sperma Ceti, adding, in order to corroborate the Stomach, a few Drops of the Balsam of Capivi, or of the Oils of Sassafras Wood and Fennel ; for such is the Nature of Sulphur, that it not only strengthens the languid Parts, but, also, dissolves and discusses the viscid Juices, by which means it is highly beneficial in Disorders of the Lungs, such as Exulcerations, Tubercles, and Vomica, arising from a Stagnation and Condensation of a viscid, caseous, and mucilaginous Humour precipitated from the Chyle.

Besides a Phthisis, Dropsies are reckoned among the most dangerous and hardly curable Diseases. But if they admit of a Cure, Elaterum was by the Ancients extolled as a Specific for this purpose ; because, when duly exhibited, it carries the Waters off both by Vomit and Stool. And if the Body is duly prepared, the Humors render'd fluid, and Emollients exhibited both before and during its Use, it is of all other Medicines the most efficacious. But as the Waters are, also, evacuated by Urine, this Intention, if the Waters are disposed for such an Excretion, is excellently answered by the Powder of Cantharides, mixed with Salt of Tartar, adding, in order to prevent any Inflammation, a few Grains of depurated Nitre, and one Grain of Camphire. The Jaundice is also, frequently, a very obstinate Disease ; but besides Emetics which act powerfully on the biliary Ducts, Rhubarb, the Roots of Turmeric and Madder, especially if boiled in Water and Wine with the Addition of Nitre and Salt of Tartar, are found very efficacious in this Disorder ; an Infusion of the middle Bark of Elder, unless the Patient is too much weakened, is, also, useful, by colliquating the viscid Bile, and expelling the small Stones from the biliary Ducts.

In a calculous State of the Kidneys, the best Specific is an Infusion of the Tops of Yarrow long and frequently used. Nor is a singular and specific Virtue to be denied to dried Strawberries, Winter-Cherries, Hounds-Tongue, Carrot-Seeds, and especially the Bark of the Ægyptian Thorn-Root, if either infused in Water or taken in weak Geneva ; for in these Substances there is a traumatic, gently balsamic, and subastringent Quality, by which they corroborate the weakened Tone of the renal Duct, and conglutinate and cure the exulcerated, and, in some measure, dissolved Substance of the Kidneys. Bitter Almonds, on account of their anodyne Oil, and Oil of sweet Almonds, are excellent demulcent and mitigating Medicines under the Paroxysm.

The Diseases peculiar to Women from some Disorder of the Uterus, especially an irregular State of the *Menses* or *Lochia*, are most commodiously treated with corrected Aloes, Myrrh, Saffron, Amber, round Birthwort duly reduced into Pills ; for which reason the *Piûla Becheriana*, and others composed in the same manner, have acquired so great a Character. In Men the Irregularities of the hæmorrhoidal Discharge are corrected by Manna and an Infusion of the Tops of Yarrow, because this Plant contains a subtle Oil, which alleviates Spasms, and with respect to its Smell, Taste, and especially its bluish Colour, greatly resembles the Oil of Camomile.

A Dysentery, which is contagious, weakens the Patient by numberless Stools, and often proves mortal, is not removed by Medicines appropriated to ordinary Fluxes, but by certain Specifics peculiar to itself. Thus 'tis certain from Experience, that Ipecacuanha is of all other Medicines the most powerful



ful Antidysenteric, if exhibited once, twice, or thrice, in due Doses, in the Beginning of the Disorder. Then afterwards other Things capable of obtunding Acrimony, mild Diaphoretics and Correctors internally and externally, as also Rhubarb as the best Laxative are to be used; but the Cascarella Bark is the best Specific for corroborating the flaccid Fibres of the Intestines, and checking their irregular Motions.

Terrible Symptoms are sometimes excited by Worms in the Intestines, for the Extirpation of, which there are various Specifics, by the *Greeks* called Anthelmintics. And though there are numberless Medicines extolled for this purpose, they are not all equally efficacious, the best, however, are *Asa foetida* and *Sagapenum*, especially when reduced to the Form of Pills, with Purgatives, such as *Mercurius Dulcis* and Extract of Rhubarb. Only 'tis to be observed that both before and after the Exhibition of such Pills, the Patient is to take a few Spoonfuls of the Oil of Olives or sweet Almonds, which, like all other oleous Substances, are highly offensive to the Worms, and sooth the intestinal Fibres spasmodically affected by the Corrosion of the Worms, whose Discharge by Stool they procure; for *Asa foetida* and *Sagapenum*, by their ungrateful Smell, kill the Worms as effectually as we know from Experience Garlick does. The Seeds, also, of Worm-seeds, and the Herb Tansey, are successfully exhibited against Worms, but they operate in no other manner than by resisting the putridous Colluvies, which impairs the Strength, and induces a slow Heat and Languor; whilst, at the same time, by corroborating the Tone of the Intestines, they facilitate the Expulsion of the Worms.

Violent Hemorrhages, from whatever Part, require speedy Relief, and efficacious Remedies, lest terrible Symptoms should ensue. In Cases, therefore, of this Nature, nothing is more efficacious than Nitre dissolved in common Water, and successively applied; and in order to prevent a fresh Hemorrhage, the Powder of the Tooth of the Sea-horse is to be frequently used. Six or eight Grains of the *Pilula de Cynoglossa* may, also, be exhibited with Success; and the Oil and Seeds of Henbane, by their narcotic Quality, obtund the exquisite Sense of the Solids, and by that means hinder the Spasms from soliciting the Blood to a certain Part, where it might be discharged. In seminal Fluxes, especially of the virulent Kind, there is not a more powerful Specific than Venice Turpentine, and its ætherial Oil; or in their stead, the Balsam of Capivi, or that of Mecha, which, after the Use of Purgatives, especially of the mercurial kind, produce excellent Effects, either with or without Camphire, if exhibited either in an Emulsion of the four cold Seeds, Milk or Whey.

In no Disorder is the Impurity of the Humours greater than in the Scurvy, which is principally endemial, arises from bad Aliments, a cold and moist Air, and is increased by a sedentary Life, and especially by Grief. But a long Course of Experience has found the most powerful Specifics for this Disorder to be Marsh-Mallows, Scurvy Grass, Beccabunga, Cresses and wild Raddish-Root; the Effects of which will be more conspicuous and infallible if their expressed Juices are drank with sweet Whey or Goats-Milk, and the Patient's Body duly prepared for such a Course. But in inveterate Scurvies, accompanied with Pains, I have known singular Relief afforded, by drinking for some time a Decoction of Pine Cones, with an Addition of the Marrow taken from the Bones of Beef and Veal.

A Lues Venerea can hardly be totally exterminated from its latent Recesses, without the Assistance of Specifics, the most powerful of which are Quicksilver, Guajacum and its Bark, and duly prepared Antimony; for there is not in the whole Materia Medica a Medicine which so powerfully moves the whole Mass of Lymph and Humours, and excites so copious a Discharge of the Saliva, which is frequently continued for some Weeks, as Mercury, which when conveyed into the Body, by the specific Gravity of its Molecules, which is greater than that of the human Juices, penetrates into the internal Parts of the Body, and passing with Force thro' the smallest Ducts, removes Obstructions in them. It, also, totally changes the Crasis of the Fluids, and, by a certain intestine Motion, induces, as it were, a putridous Colliquation of them, and by this means, tho' not without some Trouble and Danger, removes the Lues Venerea and other obstinate chronical Disorders arising from an Impurity of the Serum. The softest Mercurial used for exciting a Salivation is *Mercurius Dulcis*, joined with Absorbents, and exhibited for some Days, ascending gradually from five to twelve Grains, till the Saliva begins to flow copiously, and observing at the same time a proper dietetic Regimen. Guajacum, by the subtle, acrid and resinous Salt with which it impregnates the Water in which it is boiled, vellicates the Fibres and Coats of the Vessels, and increases the Circulation of the whole Mass of Humours and Lymph, by which means the viscid Juices are resolved, and the Obstructions removed.

For a malignant Leprosy, Herpes, Itch, and other Desedations and Exulcerations of the Skin, the best Specifics are Preparations and Decoctions of Vipers, Antimony, and especially its diaphoretic Sulphur. The *Plica Polonica*, stopping or preposterously cut off, produces violent Symptoms, for removing which no better Specific is as yet found than a Decoction of the Herb and Seeds of Club-moss, with which the Head is to be often washed; for, by this means, the viscid excrementitious Serum, so much indisposing the Brain and Head, is safely eliminated through the Hairs and Pores of the Skin with which the Cranium is covered. If the Eyes are afflicted with a saltish De-fluxion, accompanied with Redness, as in an Epiphora, and if, especially in the Night-time, the Eyelids are conglutinated by a viscid Humor, a Grain of white Vitriol, mixed with fresh Butter, and put upon the larger Orbit of the Eye, affords surprising Relief, and quickly removes the Disorder. Pellicles of the Eyes, intercepting Sight, are quickly removed by dropping the recent Fat of Vipers into the Eye, and a beginning *Gutta Serena* is excellently dissolved by Sulphur of Antimony taken internally.

When any Parts are afflicted with Contractions or Rigidity, nothing affords more instantaneous Relief, than frequently putting them into recently opened, and as yet warm Animals, by which mild oleous and natural Warmth, the tense and rigid Fibres are excellently relaxed. When after a Fall, or a violent Contusion or Blow on the external Parts, Stagnations and Concretions of the Blood and Humors produce various untoward Symptoms, a Decoction or Infusion of German Leopards-Bane almost compleats the Cure, on account of its singular inciding, resolvent and discutient Quality.

When treating of Specifics, we must mention Asses Milk, so much extolled by the Antients as highly conducive to Health and Longevity. But with respect to this, the Reader may consult the Article *LAC*, and *Patimus*, in *Tim. 2. Epistolar.*

These are the most select and approved Specifics in all the *Materia Medica*. But 'tis to be observed, that they are not possessed of absolute, but of relative Virtues, and that their Success depends upon certain limited Conditions and Circumstances, which ought to be duly adverted to in using them. Besides, tho' these Remedies are of singular Use when rightly used, they are, nevertheless, of no manner of service, unless the Body is properly prepared for them, and the Obstacles which might impair or hinder their Operation removed. Thus when there is a Redundance of Blood, and the *Præparatio* are overcharged with Sordes, Venesection must be used, and the Stomach and Intestines freed from the Load of crude, bilious, and excrementitious Sordes, before Specifics can be of any Service.

Nor is it to be thought that when Specifics are used, there is no Necessity for other external and internal Medicines, capable of correcting and evacuating the peccant Humours: For Specifics do not so much affect the peccant Matter as the Motion of the Solids and Fluids, which they assist by reducing it to its natural State; and this they perform best when after the material mortific Causes are removed, and the peccant State of the Humours corrected by Medicines of a tempering, resolvent, discutient, and deobstruent Quality, they are exhibited in a due Dose, at a proper Season, and in a laudable manner. In a particular manner, we are to take Care that the *Præparatio* be free from impure and viscid Juices, by which the Force of the Medicine is greatly obtunded, or totally suffocated: Whereas, when these are cleansed, the Texture of the Medicine remains entire, and produces its desired Effect on the nervous Substance of the Stomach and Intestines; as is obvious with respect to Emetics, Purgatives, Opiates, Analeptics, and all other Substances, small Quantities of which produce considerable Effects.

Lastly, with respect to Specifics, the Physician ought to know not only the Time and Dose in which they are to be exhibited, but, also, how long they are to be used, and what Regimen and Method of Living is most proper for the Patient; for that Method of Cure which consists only in the Prudence and Judgment of the Physician, and his diligent Attention and Observation of the Constitution of the Patient, is of so great Importance to the desired Effect, that it is preferable to the Use of Specifics alone: And without such an Observation and Attention to the State and Constitution of the Patient, he will find the best of Medicines fail, and cannot properly be said to understand his Profession. He who duly considers what has been said, will see how far Art is necessary for the Cure of Diseases. *Frederic Hoffman.*

**SPECILLUM.** A Probe. *Specilla*, also, sometimes imports Pledgets, or Tents.

**SPECULARIS LAPIS.** Offic. Boet. 397. Kentm. 26. Mont. Exot. 14. Schrod. 356. Worm. Mul. 56. *Lapis specularis*



*ularis Neatericis*, Charlt. Foff. 23. *Glacies Mariæ, seu Lapis Specularius*, Koning. MUSCOVY-GLASS.

It is a fossile Stone, resembling Crystal, transparent, and divisible into very thin *Lamineæ*. It is erroneously supposed, says the learned *P. Amman*, to be the *Glacies Mariæ*, [the Virgin Mary's Looking-Glass] as it was formerly believed to be the *Aphrofelene*, or *Selenites*: For both Opinions are fabulous; the first, because it is uncertain whether the Virgin Mary ever made use of such a Glass; and the last, because it neither contains the Image of the Moon, nor increases or decreases as that Planet does. We have it imported from *Muscovy*, *Spain*, and other Parts; and it is of Use in Surgery, in the Cure of fordid Ulcers. It is of Service, also, in difficult Labour, and is an Arcanum against the Epilepsy; and is, also, reckoned among Cosmetics.

**SPECULUM.** A Probe; or an Instrument for dilating the natural Passages, or Cavities. Thus there are the *Speculum Ani*, represented Tab. 55. Fig. 15. The *Speculum Oculi*, Tab. 38. Fig. 15. and 16. The *Speculum Oris*, Tab. 41. Fig. 11. and 12. And the *Speculum Uteri*, of which there are many Sorts described by Authors.

The *Tunica Aranea* of the Eye is called *Speculum*. *Speculum Citrinum* is yellow Arsenic; *Speculum Album*, white Arsenic.

**SPECULUM INDICUM**, is Filings of Iron. *Rulandus*.

**SPELTA.** See *ZEA*.

**SPELTRUM.** Speltre; the Name by which Mechanics call Zink. See *ZINCHUM*.

**SPIRAGUS.** According to *Blancard*, the same as *ASPARAGUS*.

**SPIRGULA.** A Name for several Species of *ALSINE*, which see.

**SPERMA CETI.** Parmacity. See *BALÆNA*.

The *Emplastrum de Spermate Ceti* is thus prepared:

Take of White Wax, four Ounces; Sperma Ceti, two Ounces; Galbanum dissolved in Vinegar, strained and boiled, an Ounce. Mix and make a Plaster, according to Art.

This Plaster is esteemed an Emollient, and is much recommended as an Application to the Breasts, to prevent their growing hard, and the Milk from coagulating therein. It is, also, said to be good for stumous Swellings.

**SPERMATICOS.** σπέρματικός. Spermatic. An Epithet for the Organs of Generation, and the respective Parts thereof.

**SPERMATOCELE.** A Species of *Hernia*, consisting in a Tumor of the Spermatic Vessels; a Disorder frequently consequent to a humoral *Hernia*, or venereal Swelling of the Testicles.

**SPERMATOPŒA.** Medicines which increase the Seminal Juices.

**SERNIOLA, or SPERNIOLUM.** Frogs Spawn. *Rulandus*.

**SPHACELUS**, in Botany, is a Name for the *Scordium Alacum*; five foliis *Agrestis*.

**SPHACELUS.** σφακελος, or σφακελισμός. A Sphacelation. See *GANGRÆNA*.

The Terms σφακελος, σφακελισμός, σφακελίζω, σφακελίζομαι, have various Significations in *Hippocrates*; sometimes they mean a Sideration and Corruption peculiarly of a Bone, as 7 *Aph.* 79. and in several Places, and *Lib. de Tract.* where we read, for instance, καὶ ὑπὸ κινδύνῳ σφακελίσαι τὸ ὅριον τὸ τῆς πτέρης, “and thus the Bone of the Heel is in danger of Sideration.” They bear the same Sense in many Places of the Book *de Artic.* And this Exposition of the Words is warranted by *Galen*, who, in his Comment on 7 *Aph.* 50. says, τὸ σφακελίζω μιν αὖ, πολλὰκις ὕρκειν ἢ τῷ περι ἀγῶν καὶ ἀφθρῶν ἐπὶ τῷ διαφθίρεισθαι τὸν ὅριον φέρον, “the Word σφακελίζω [to be afflicted with a Sphacelus] is often used in the Books *de Fract.* and *de Artic.* “for διαφθίρεισθαι [to be corrupted.]” *Celsus* uses the Verb *vitari* in the same Sense concerning a Bone; for instance, *Lib.* 8. Cap. 9. where we read, *Omnia mora vitanda erit, ne Os infra vitietur*, “All Delays are to be avoided, lest the Bone underneath should be corrupted.” But these Words are spoken, also, in general, of the Sideration and Corruption of any Part, whether Flesh, Nerves, or Bones, as *Galen* writes in many Places, and especially, *Com. 2. in Lib. de Fract.* where he says, τὸ ἔλκεν τις ὅτις ἰσχυρὸν μορὴ φθορῆς, &c. “The Antients call the Corruption of the whole Substance of any Part a *Sphacelus*; but to express a Corruption of the fleshy Parts, they use other Words; for which reason he (*Hippocrates*) usually calls the Flesh, in such a Case, σαρκώ, μὴ δέσσει, σπέρματι [*Sapran, Mjadosjan, Sepmenen*, Words importing Putrefaction] and by other like Names; but when he speaks of a Corruption of the whole Substance of the

“Bone, he uses the Word σφακελος, which Affection is occasioned by a Conversion of the adjacent Flesh into vicious “Ichos [or Sanies] which by their Irrigation corrupt the “Bone.” The same Author, *Lib. de Tumor.* has these Words, “I call, says he, by the Name σφακελος, every Corruption of the solid Parts, as well what happens to the “Bones as to the Flesh and Vessels;” and he there makes a Gangrene a Species of *Sphacelus*. Agreeable hereto, σφακελον, in *Exeg.* is expounded φθορὰ πᾶσα καθ’ ὅν αὖ γίγνεται τρέπον, “every Corruption, after what manner soever it happens.” The same Author, *Comm. in 7 Aphorism.* 50. expressly tells us, that σφακελος is sometimes taken for a Sideration or Corruption of a Part which tends to Destruction, but is not yet a confirmed Gangrene; and more he says to the same purpose, *Com. 4. in Lib. de Art.* where, tho’ he distinguishes a *Sphacelus* from a Gangrene, yet, because of their Vicinity, he acknowledges the Words are sometimes erroneously used by Physicians. In this universal Sense, I think, is to be understood the σφακελος ἐν ἐν-φαλῳ, “the Sphacelus of the Brain,” *Lib. 2. de Morb.* the σφακελισμός ἐν ἐν-φαλῳ, in the second and third Book, and ἐν σφακελίστῃ ὁ ἐν-φαλος, *Lib. 2.* in two Places; and σφακελίζεται ἐν-φαλος, in the same Book; σφακελος τῷ ἐν-φαλῳ, *Lib. de Aer. Aqu. & Loc.* ἡκίστοις σφακελιστῇ ὁ ἐν-φαλος, 7 *Aph.* 50. and ἐν-φαλος σφακελίστατος, *Coac.* 187. So that a σφακελος, Sphacelus, of the Brain is so called, when the Brain, from any Cause whatsoever, is so far corrupted as to be in danger of a *Sphacelus*. And by κεφαλῆς σφακελος, 7 *Epid.* we are to understand an Inflammation of the Head, or such a Disorder as threatens a Sphacelus, or a very intense Pain of the Head which naturally tends to the Destruction of the Patient in an acute Fever. Thus again is the σφακελωδὴς ἱεροκράνιας of *Archigenes* expounded by *Galen*, *Lib. 2. de Loc. Affect.* of those who have so intense a Pain, or so violent an Inflammation on one Side of the Head, as to be in imminent Danger of a *Sphacelus*. Agreeably to this Sense, *Hesychius* expounds σφακελος by ἀμέλεις πόνη, “an immoderate Pain;” and *Varinus* expounds σφακελίζω by ἀλγὺν μὴ ἀσπασμῷ, “to be affected with convulsive “Pains.” *Pliny*, also, *Lib. 17. Cap. 24.* expounds the σφακελισμός of the Trees in *Theophrastus*, *Hist. Plant. Lib. 4. Cap. 16.* by *Dolor Memborum*, “a Pain in the Members,” or Branches; and σφακελίζει, in *Hesychius*, is ἐδυσχεῖ καὶ ἀλγύνει, [Verbs importing Pain.] These various Senses of the Word σφακελος were known to *Galen*, as appears, *Lib. 2. de Loc. Affect.* where he says, “All are not agreed as to the Signification of this Word σφακελος; for some understand by it a violent Pain, others an Inflammation in so high a Degree as to create Danger of a Corruption of the Part, which some call a Gangrene. Some call a Corruption of the Part itself σφακελος; others σπασμὸς [a Convulsion]; others, again, give the Name of σπασμὸς not to Corruption in general, but only to what proceeds from an Inflammation of nervous Bodies. Some understand it not of a σπασμὸς actually present, but what is expected from the Greatness of the Inflammation; some call it a strong Tension, others a Putrefaction. The σφακελισμός νῆστι καὶ ὀρίῳ, “Sphacelismus of the Nerve and Bone,” in Wounds, *Prophet. 2.* seems to be expressed in *Celsus*, *Lib. 5. Cap. 26.* by *Nervi Resolutio*, “a Resolution of the Nerves.” In much the same Sense are we to understand ὁδὸς σφαστελισμός, “a Sphacelism of a Tooth.” *Coac.* 236. σφακελισμός τῆς γνάθου, “a Sphacelism of the Cheek,” *Lib. 5. Epist.* σφακελίστατος σιαγῶν, “a Sphacelism of the Jaw,” from a Tubercle and Abscess, 7 *Epid.* and ἰσχυὸν ἰσφακίσι, “the Os Ischium was affected with a Sphacelus,” from a Luxation, “that is, “dead and withered,” 5 *Epid.* ὁ πῦρ ἰσφακίσι, “the Foot “was affected with a Sphacelus;” and πυχίς σφικτισμός, “a “Sphacelism of the Cubit,” from a Fall, *Lib. eodem*. There is also a σφακελος which proceeds from an Inflammation of the Part, *Lib. de Ulcer.* We are told, also, by *Galen*, *Com. 4. in Lib. de Art.* and *Com. in 7 Aph.* 50. that σφακελος is taken for an incipient Gangrene; in which Sense is to be understood that Passage, 1 *Epid.* ὅσα σφακελίζω ἀπολεθῆναι τῇ, φράζα ἰλῶσαι καὶ ἐγνώσαι, “Where Things tend to a Sphacelus, the Vessels are “to be cut, a Wound made, and the Cure thus effected.” Here the Author plainly gives Directions how to manage an incipient Corruption, or a Gangrene not yet confirmed.

**SPHACERUS.** σφακερος, in *Galen's Exegesis*, is a Word ascribed to *Hippocrates*, for which he quotes a Passage in the Additions to the Book *de Cap. Vulner.* but observes, at the same time, that most Copies read σφακελος. *Farrius* here reads σφακελος for σφακερος, and so the Passage quoted will read κεφαλήν αὖ καὶ σφακελος ἐν ᾧ, “If there be a Pain of the Head, and “a Sphacelus;” whence he infers, that the Word σφακελος, in the *Exegesis*, is put for σφακελος. What Additions there were to the Book *de Cap. Vulner.* in *Galen's* Time, is not easy to be known; at present there are none remaining but those which relate to the Book *de Art. Loc. & Aquis*.



SPHÆNOIDES OS. The Sphænoide, or Cuneiform Bone; from σφῆν, a Wedge. See CAPUT.

SPHÆNOPALATINUS. The Name of a Muscle of the Uvula, which see.

SPHÆRION. σφαῖριον. A Pill.

SPHÆRISTICA, five *Pilæ Ludus*, is a Species of gymnastic Exercises performed with a Ball. Of the *Sphæristica*, there were four Kinds in Use among the *Greeks*, which were those with the *little Ball*, the *great Ball*, the *empty Ball*, and the *Corycus*; which last *Mercurialis* reckons among the *Balls*, tho' *Galen*, *Oribasius*, and *Paulus* make it a distinct Thing, because it was, as he says, a *Ball*, or at least something like it, as will appear from the Description below.

The Exercise with the Ball, says *Oribasius* from *Antyllus*, induces a greater Promptness to Motion, and strengthens the vital Actions. Of the Exercise with the *little Ball* there were three Kinds: The first was with a *Ball* of a very small Size, in which the Parties held their Bodies very erect, and played with their Hands at a very near distance. This Exercise was very beneficial to the Legs, which were kept very much upon the Stretch all the Time; it was, also, good for the Back, the short Ribs, and Arms, and rendered the Flesh solid.

The second *Ludus parvæ Pilæ* was with a *Ball* a little bigger than the former; in this they intermingled Arms, but kept off with their Bodies, held their Heads erect, and mov'd in various manners, to this Side, or to that Side, according to the Direction of the *Ball*. This, says *Oribasius*, is the best and most salutary Exercise performed with the *Ball*, rendering the Body not only healthy and prompt to Motion, but robust and vigorous, giving a Person a firm Look, and not loading the Head.

The third Exercise of this Nature, was with a *Ball* of a larger Size than the two former. In this one Party stood while the other moved; the first gave the *Ball* a violent Stroke, which sent it to a great Distance, in which Action there accrues some Benefit to the Arms and Eyes, while the other Party, who is in Motion, is the better for it, not only in the fore-mentioned Respects, but, also, in his Legs on account of Running, and in the Spine of the Back, because of the Inflections he makes while he runs. And these are the three Exercises with the *little Ball*.

The Exercise with the *great Ball* differed from the former, not only with respect to the Size of the *Ball*, but the Position of the Hands; for all the former were played or performed with the Hands always below the Shoulders, but in this they held their Hands above their Heads, and sometimes moved on Tiptoe, that they might reach the higher; and sometimes vaulted, that they might catch the *Ball* when it flew over their Heads. This Exercise procured Firmness to the whole Body, and was particularly good for the Body, as it drew the Humours downwards. But if the *Ball* be of above a moderate Size, as some there are which require both Hands to throw them, it strengthens, indeed, the Arms in discharging it; but then it gives severe Strokes, and is improper for those who are sick, or upon the Recovery; and not good for Persons in Health.

This Account of the *Ludus parvæ & magnæ Pilæ*, or the Exercises of the *little* and *great Ball* is found in *Oribasius*, *Med. Col. Lib. 6. Cap. 32.* taken from *Antyllus*. In the *Ludus parvæ Pilæ* the Philosophers *Epigenes* and *Ctesibius* of *Chalcis*, are said to have excelled: And besides the three Kinds above described, *Pollux* mentions the *Aporraxis* and *Urania*, in which they reclined their Bodies, and threw the *Ball* directly upwards, and intercepted its falling to the Ground.

Among the Kinds of *Parva Pila*, *Mercurialis* reckons, also, what, in *Athenæus*, is called ἀγρᾶρον, *Harpastum*, and φαινδα, *Pheninda*, both because the *Harpastum* is described by *Galen*, in his Book *de Ludis parvæ Pilæ*, among other Plays of that Kind, and because *Clemens Alexandrinus* makes the *Pheninda*, which *Pollux* makes to be the same with the ἀγρᾶρον, a kind of Play with the *parva Pila*. Of the Nature of this Exercise, see below.

As to the *empty Ball*, we have no clear Notion of it, says *Mercurialis*; but if we may be allowed to conjecture from the Words of *Antyllus*, in the Chapter of *Oribasius* above quoted, we may suppose it to be like the rest, sewed up with Leather, but full of nothing but Air or Wind; whereas the others were stuffed with Feathers, or some other Matter. Thus *Mercurialis*; to which we may add from *Antyllus*, that the *empty Ball* was, also, called a *Follicle*, and gave the Party as much Exercise of Motion and Running as the third kind of *Ludus parvæ Pilæ*, to those who played the moving Part, but was unfazeable and clumsy, and difficult to be managed.

The *Corycus*, and the manner of Exercise with it, is described by *Oribasius* from *Antyllus*, as *Mercurialis* took it from a Copy in the *Vatican Library*, in the following manner:

“ The *Corycus* for weak Bodies, who chuse that Exercise, is stuffed with Figs or Floor, but for those of a robust Habit with Sand. The Size of it is accommodated to the Age and Strength; and it is hung to the Roof of the *Gymnasium*, with its Bottom as high above the Floor, as is the Navel of the Person who is to exercise it. The Party takes the *Corycus* in both Hands, and heaves and shoves it, first gently, afterwards with greater Force, so as to follow it when it recedes, and to give way when it returns, as being compelled by its Violence, till at length he discharges it out of his Hands with a Spring, that it may recur with the more Violence on the opposed Body. At last, after many Recourses, he restores it by Degrees to its first Situation and Rest, obviating its Returns, and breaking the Shock sometimes with the Hands protended, sometimes with the Hands upon the Breast, and sometimes with the Breast alone, the Hands being cast behind the Back.” From this Passage of *Antyllus* we have good Reason to conjecture, that the *Corycus* was spherical, or at least of a roundish Figure; for if it had been angular, it could not have thus struck upon the Breast and Hands without hurting those Parts. What follows is from *Mercurialis*.

There were, also, four kinds of *Balls* in Use among the *Latins*, which they called the *Follis*, the *Trigonalis*, the *Paganica*, and the *Harpastus*, which some will have to be all comprehended by *Cælius Aurelianus* under the Name of *Itallica Sphæra*.

The *Follis* was a great *Ball* made of Leather, and full of nothing but Wind; if it were of a larger Size, it was impelled with the Arm, and was then sometimes simply called *Pila*; and from the Figures in some Coins of the Emperor *Gordian* the third, we may conjecture that every one of the Players had his own *Pila*. If the *Ball*, or *Pila*, were of a lesser Size, it was thrown out of the Hand, and was called a *Follis pugillaris*, as in that of *Plautus's Rudens*, *Extemplo hercle ego te Follē pugillatorium faciam*. And I believe it was sometimes called *Folliculus*, as by *Suetonius* in the Life of *Augustus*, who, he says, took great Delight in playing with it.

The *Pila Trigonalis* was a *little Ball*, and had its Name, as some think, from the Place where it was used, which they suppose to be triangular, but more probably from the Number, Figure, and Situation of the Players. This was sometimes simply called *Follis*, as in that of *Martial*.

Non Pila, non Follis, non te Paganica Thermis

Præparat — — — — —

Non Harpastus vagus pulverulenta rapis.

For if there are only four Kinds of the *Pila*, and the other three are named, the *Pila trigonalis* must here come under the simple Denomination of *Pila*. And I suppose *Cælius* to speak in the same manner, where he says, *Ab alio citata vexatis Pilam, et reliqua superiores Partes exercitia convenire*. “ For those who are molested with a Looseness, the *Pila*, and other Diversions which exercise the upper Parts, are proper.” For in this Play the lower Parts remained at rest, while the upper Parts were in continual Agitation, the Players, as we gather from *Martial*, being placed in a triangular Situation, in such a manner as to receive the *Ball* sometimes from the Right, and sometimes from the Left, and always to preserve it from falling to the Ground.

The *Pila Paganica* was so called because it was very common, and used in the Country-Villages called *Pagi*, or in the *Pagi* of the City, which, according to *Dionysius Halicarnassus*, was formerly divided into four Tribes, which were, also, called *Pagi*, and the Inhabitants *Pagani*. This *Pila* was made of Leather, stuffed with Feathers, broader than the *Trigonalis*, and harder than the *Follis*. That this, among the rest, was used in the *Gymnasium*, appears from the Verses of *Martial*, and it was the Custom of the *Romans*, immediately after exercising themselves with the *Pila*, to go into the Bath.

The fourth and last *Pila* of the *Latins* was the *Harpastum*, which from the Name seems to be the same as the ἀγρᾶρον of the *Greeks* beforementioned. This was a *Ball* which they snatched or wrested one from another; but the Size or Materials are unknown; only it appears from *Athenæus* to have been of a round Figure, though it was probably of Leather like the rest, the Descriptions of all which are omitted by Authors because they were known to every Body in their Time. *Galen*, however, who gives the best Account of it, in his Book before-mentioned, shews it to be a *little Ball*, and not one of a middle Size, as some will have it; whence the Play now called *Foot-Ball*, tho' in some Particulars it resembles that with the *Harpastum*, yet differs from it in the Size of the *Balls*, our *Foot-ball* much exceeding the

[ \* F I I ]

*Harpastum*



*Harpastum* of the Ancients in Bigness. The Exercise of the *Harpastum* appears, from the before-cited Verse of *Martial*, and other Passages, to have been very laborious and quite improper for Women; and therefore I used to wonder why *Cælius Aurelianus* advises the Nurses of epileptic Children to exercise themselves at playing with the *Sphæra*, or at some kind of Dancing, unless we suppose him to mean by the *Sphæra* the same as the *Follis*, which was used by Children, as well as infirm and aged Persons, as appears from the following Verse of *Martial*.

*Folle decet pueros ludere. Folle senes.*

Besides what has been said of the good Effects of the Exercise of the *Pila*, we may observe that *Galen* and *Paulus* reckon the Use of the *Parva Pila* among those Kinds of quick Motion, which are not attended with Violence, but have a Virtue of attenuating gross Particles. And I suppose, that *Trallian* had the Play with the *Pila Magna* in view, when, in the Cure of the *Priapismus*, he recommends the Exercise of the *Sphæra*, by which the peccant Matter is diverted to different Parts, and the stultent Spirit is digested. *Aretæus* was of opinion that the Exercise both of the little and great Ball were bad for vertiginous Persons, because the Circumvolutions and Strainings of the Head and Eyes were subject to produce a Vertigo. *Paulus* reckons that of the *Corycus* among quick Exercises, which having a Virtue, as we said, of attenuating gross Particles, *Cælius Aurelianus* had very good reason to prescribe the Exercise which the Greeks, as he says, call *Corycomachia*, in a *Polyfarchia*, or too corpulent a Habit of Body; and *Hippocrates*, *Lib. 2. de Diet.* that the *Corycomachia*, and the *Chromia*, will have the same Effects as the *Acrocheiria* [a Sort of Wrestling at Arms-length.] *Antyllus* supposes the Exercise of the *Corycus* to render the Body muscous and robust, and to be adapted to the whole Body, and to all Parts of the Viscera, on account of the Blows to which it exposes the Party. *Aretæus*, also, recommends the *Corycobolia* in an *Elephantiasis*. But if we consider the Blows which are usually received from the *Corycus* on the Breast, we shall be convinced that it must be dangerous for those who are of an infirm Breast to use that Exercise, and that it may possibly produce a Rupture of the Vessels of the Thorax.

Having thus spoken of the good or bad Effects of the Use of the several Kinds of the *Grecian Pila* with respect to Health, we proceed to the like Consideration of the *Latin* or *Roman Pila*, as distinguished into its several Kinds, which, as we have observed, were equal in Number to those of the other. And, in the first place, the Use of the *Follis* exercises the whole Body, and in a particular manner, when it is struck, the Arms and the Back; and strengthens those Parts; for which reason, I suppose, *Cælius Aurelianus* intends this Kind of *Pila*, when he advises epileptic Persons to exercise their Shoulders in playing with the *Sphæra*. When this Sort of Ball is thrown with the Hand, that Part indeed receives most Benefit; but, upon the whole, this kind of Exercise is good for the Viscera, and is of admirable Use in the Expulsion of Stones and Gravel from the Bladder and Kidneys. And therefore *Augustus*, I suppose, who was much subject to these Disorders, used to divert himself, as we are told by *Suetonius*, with the Exercise of the *Follisculus*; which, as it principally employs the superior Parts, is very judiciously advised by *Celsus*, to those who labour under a Flux in the Belly, or a Trembling of the Body. I imagine, also, this kind of Exercise to be meant by *Pliny the Younger*, when, in one of his Epistles, giving an Account of the manner of Living, and of the Regimen observed by *Spurina*, a very prudent Man, and very studious of his Health, he observes, that he exercised his Body with the *Pila*, and with that kind of Exercise used *cum Senectute pugnare*, “to struggle with old Age.” So that there is a great deal of Truth in that Verse of *Martial* above quoted.

The *Pila trigonula*, which was small, and answered to the third Species of the *Parva Pila* described by *Antyllus*, as before mentioned, produced the same Effects as that did; but in a particular manner, it exagitated and exercised the Eyes, which were always necessarily upon the Stretch, and turned sometimes this way, sometimes that way, now upwards, then downwards, but perpetually in Motion. *Horace*, therefore, had reason to say that this Kind of Exercise was bad for a Lippitude, as in the following Verse.

*Namque Pila Lippis damnosum est ludere crudis.*

It is certain that a Lippitude, or a lachrymous Disposition of the Eyes, are exasperated by the least Motion, but Rest comforts and refreshes them; and the same may be said with respect to those who are molested with Crudities; for it is a general Rule, “That no Exercise is to be undertaken before

“the Food be perfectly digested.” But as for those who are molested with Flatulences in the Belly and Stomach, or Pains proceeding from Cold, the Exercise of the *Pila* is so far from being prejudicial, that it proves of very great Benefit, by heating them, and powerfully discussing those Flatulences. *Cælius Aurelianus*, therefore, deserves Praise, for particularly recommending, among other Exercises, the Use of the *Pila* for the Cholic; and for the same Reason has *Celsus* commended it as proper for those who are of a weak Stomach.

The *Pila Paganica*, on account of its Breadth and Hardness, was difficult to be manag’d, and therefore more proper for Peasants, and those of hard and robust Bodies, than for Citizens, and such as are not inur’d to Labour. And it would be thought utterly unfit in these present Times, for old Men and Children, and those of a valetudinary Disposition of Body, to exercise themselves with this Kind of *Pila*.

The Use of the *Harpastum* is to be reckon’d among quick and violent Exercises, on which Account it may be said to attenuate, expel Excrements, increase Heat, strengthen the Body, and particularly the Arms and Shoulders: “And while they encounter together as *Galen de Ludo parvæ Pila* describes it) and strive to hinder one another, that the Person placed in the Middle might not receive the Ball, there arises a great and mighty Struggle, with much Collaring and Wrestling, by the first of which the Head and Neck, and by the other, the Sides, Thorax, and Belly, from such a Multitude of Liftings, Depressions, Throwings off, and Pushes with the Head, and other Ways of taking hold in use among Wrestlers, are extremely fatigued: The Loins, also, and the Legs, in such Kinds of Exercises are stretched in an extraordinary Manner.” We may conclude, therefore, that as the *Harpastum* confirms more and more those who are sound and robust, so it is very prejudicial to those who have a weak Head, or infirm Neck, some Defect in the Thorax, or have their Kidneys or Loins overheated. *Mercurialis de Arte Gymnastica*.

SPHÆROCEPHALUS. The Name of a Species of *Carduus*, with round Heads, call’d *Carduus Erioccephalus*.

SPHÆROMATA. σφαῖματα. Carnous, round Protuberances of the Buttocks.

SPHAGE. σφαγή. The anterior Part of the Neck, or Throat. Hence,

SPHAGITIDES, The Jugular Veins.

SPHAGNUM. A Species of Moss. See the Explication of botanick Terms, under the Article BOTANY.

SPHATULA FÆTIDA. The same as SPATULA FÆTIDA.

SPHENDAMNOS, according to *Blancard*, is a Name for the Maple.

SPHENDONE. σφινδον. A Sling, or a Bandage resembling a Sling; or a Woman’s Girdle. *Galen. Exeges.*

SPHINCTER. A Name appropriated to many Muscles, which close the natural Passages. Thus there is the

SPHINCTER ANI. This is a large, thick, fleshy Muscle, encompassing the Anus; its Figure and Series of Fibres externally, immediately under the Skin, incline to an oblong Oval; it is connected forwards to the *Accelerator Urinæ*, backwards to the *Os Coccygis*: As it is continued farther upon the Body of the *Intestinum Rectum*, its Fibres are circular for near two Inches in Breadth. It is much larger in Man than in other Animals, in whom, by Reason of the erect Position of the Body, there is greater Force required to retain the Fæces, which is the Office of this Muscle. See *Tab. 14. Fig. 1. 5.* See *COELIA*.

The SPHINCTER GULÆ, is the OESOPHAGÆUS.

The SPHINCTER LABIORUM, is the same as the *Constrictor Labiorum*. See *CAPUT*.

SPHINCTER VAGINÆ. This lies immediately under the Clitoris, encompassing the Vagina with circular Fibres, three Fingers in Breadth: In some Subjects, it scarcely appears fleshy.

Thus acting not only strengthens the Vagina, but thereby, also, it hinders the Blood, in its Return from the Plexus Retiformis of the Pudendum, by compressing some of its subjacent Veins which pass underneath, by which Means the Labia became distended, and the Vagina contracted.

SPHINCTER VESICÆ.

*Fallopian* observes, that the Anatomists of his Age had not well describ’d this Muscle in placing it below the Prostate, in which Case, as he alleges, the Semen in the venereal Act could not be emitted without the Urine; which Observation latter Authors have not taken Notice of, either through Inadvertency in Dissection, or being imposed on by Part of the *Levator Ani*, which remained on the Prostate, which *Riolanus* calls the *Sphincter Externus*. It is seated in the upper Part of the Neck of the Bladder, immediately above the

*Utricle*



*Glandula Prostata*, where (as *Fallopian* says) you must not expect to find an entire Muscle and Substance distinct from the Substance of the Canal, like that of the Anus, but the more fleshy Part of the Neck of the Bladder, composed of many transverse Fibres, whose Contraction hinders the involuntary Egress of the Urine.

To discover these transverse Fibres, our Author advises to immerge the Bladder in scalding Water after Inflammation, the external right Fibres being removed, these will appear underneath.

**SPHINGONTA.** σφίγγοντα. Astringent or obstruent Medicines.

**SPHONDYLIS.** The Name of an Insect about the Size of one's little Finger, with a red Head, white Body, and eight Feet. It is boil'd for medicinal Uses in Oil or Wine, and is esteem'd resolvent, good to fortify the Nerves, to dissipate rheumatic Humours, and is applied to Fractures. *Lemery des Dragues.*

**SPHONDYLUM.**

The Characters are;

It has a long perennial Root; the Leaves are very large, variously jagged, and cut into large Lobes. The Petals of the Flowers are bifid, horned, and the outer Petal larger than the rest. The seed is large, flat, oval, with an Apex emarginated, or sloping inwardly; it is, also, striated, generally deposits its Invelucrum, or Husk, and is mark'd with black Streaks on the Superficies.

*Boerhaave* mentions six Sorts of *Sphondylium*, which are;

1. *Sphondylium*; vulgare; hirsutum. *C. B. P.* 157. *Tourn. Inst.* 320. *Boerb. Ind. A.* 66. *Sphondylium*, *Offic. Ger. Quoad descript.* 856. *Emac.* 1009. *Raii Hist.* 1. 408. *Synop.* 3. 205. *Sphondylium vulgare*, *Park. Theat.* 953. *Sphondylium quibusdam, sive Branca Ursina Germanica*, *L. B.* 3. 160. **COW PARSNAP.**

It grows on Meadows and the Borders of Fields, and flowers in July. The Seed is commended by *Dr. Willis, de Morb. Convuls.* from *Joannes Anglicus*, as of excellent Service in hysterical Paroxysms. It is reckon'd by *Buxbaume* and *Schroder* one of the five emollient Herbs. *Dale.*

The Virtues ascribed by *Dioscorides* and *Pliny* to the *Sphondylium* seem not to belong to this Plant, whence it is justly doubted whether it be the true and genuine *Sphondylium* of the Antients, though the Description of the *Sphondylium* in *Dioscorides* pretty well agrees with it.

The Root, according to *Tragus*, has the Virtue of mollifying and repressing Tumors, particularly those of the Matrix, Liver and Spleen. The Surgeons use the expressed Juice of this Herb in emollient Ointments. *Fuchsius* ascribes the same Virtues to the Root as to that of the *Acanthus Verus*, which is of a drying and somewhat inciding Quality: But *Gesner*, with whom agrees *C. Hoffman*, says it is very far from having the Virtues of the *Acanthus Verus*. *Schroder* says it is of principal Use in Clysters, and other Purgatives, under what Form soever, but generally in Cataplasms. The Inhabitants of *Poland* and *Lithuania*, as *Dodonaeus* relates, boil the Leaves and Seeds of *Sphondylium* in Water, and of the same, with an Addition of Ferment, make a Drink called *Passl*, which serves the Poor instead of Beer. The Leaves of *Sphondylium* are very grateful Food to Rabbits. *Raii Hist. Plant.*

The *Sphondylium* has Leaves resembling, in some Measure, those of the Plane-Tree, and shaped much like those of the *Panax*. The Stalks rise to the Height of a Cubit, or more, and are like those of Fennel. The Seed on the Top is like that of *Seseli*, double, but broader, whiter, and more chaffy, and of a strong Smell. The Flowers are white, and so is the Root, and like a Radish. It grows in marshy and watry Places.

The Seed purges pituitous Humours by Stool, and cures those who labour under Disorders of the Liver, the Jaundice, Orthopnea, Epilepsy and Hysterics. Used in a Suffumigation, it rouses those who are seiz'd with a Cataphora. The Oil is proper in an Embrocation for the Head under a Phrensy, Lethargy, or Head-ach. Applied with Rue, it stops the spreading of a Herpes. The Root is exhibited in the Jaundice, and Disorders of the Liver; scraped and thrust into Fistula's, it consumes Callosities therein. The Juice of the recent Flowers is good for ulcerated and purulent Ears. It is prepared by Infusion, like other Juice, and then reposit. *Dioscorides, Lib. 3. Cap. 90.*

*Pliny* gives the same Description and Virtues of the *Sphondylium*, or, as he has it, *Sphondylon*, with *Dioscorides*, whom he seems, in this and other Particulars of the *Materia Medica*, to agree.

2. *Sphondylium*; maximum; Transilvanicum; Ricini folio. *Panace Heracleum*. *Mach.* 544.

3. *Sphondylium*; hirsutum; folio angustiore, minutius lacinato; caule utroque pappo, flore rubello.

4. *Sphondylium*; majus; sive *Panax Heracleum* quibusdam. *J. B.* 3. 2. 161. *Panax, Sphondylii folio, sive Heracleum*, *C. B. P.* 157.

5. *Sphondylium*; hirsutum; foliis angustioribus. *C. B. P.* 157. *Prodr.* 83.

6. *Sphondylium*; Alpinum; glabrum. *C. B. P.* 157. *Prodr.* 83. *J. B.* 3. 163. *Boerb. Ind. Alt. Plant.*

It is called *Sphondylium*, because it has an unpleasant Smell, like the Animalcule, or Insect called *Sphondylis*.

It is of an acrimonious Quality, like the *Ferula* and *Thapsia*, and not receiv'd in Medicine, though it be look'd upon in the Country as an Emollient. The Plant, however, is said to be very good in Clysters and Cataplasms, and to be of service in the Epilepsy. A Decoction of the Leaves or Roots is good for the Hysterics. *Hist. Plant. ascript. Boerhaave.*

**SPHONDYLUS.** The Name of a Stone, found in the Head of the *MUGIL*.

**SPHYGMICA.** That Part of Medicine which treats of Pulses, from σφύγμη, a Pulse.

**SPHYRA.** σφύρα. The Ankle.

**SPHYRÆNA.** σφύρα. The Name of a long, thin Fish, with a pointed Nose like a Beak.

**SPICA.** A Spike. See the Explication of botanic Terms under **BOTANY**.

**SPICA NARDI.** See **NARDUS INDICA**.

**SPICA TRIFOLIA.** A Name for the *Melilotus*; *Cretica humillima*; *humifusa*; *flore albo, magno*.

**SPICA VULGARIS.** A Name for the *Lavandula*; *angustifolia*, and, also, for the *Lavandula*; *angustifolia*; *flore albo*.

**SPICA**, in Surgery, is a Species of Bandage. See **FASCIA**.

**SPICATUM.** An Epithet for a precious Ointment mention'd frequently by *Galen*, and much us'd by the Rich and Luxurious.

**SPINA.** The Spine is that long Pile of Bones reaching from the *Condylode* Procellis of the *Occhiput*, to the Extremity of the Rump. It somewhat resembles two unequal Pyramids, whose Bases are common, or joined together. The Spine is not however strait, but has four or five remarkable crooked Turns; for in descending from its superior Part, it is made to advance forwards by the Force of the Muscles, which pull the Head and superior *Vertebrae* back, being greater than the contracting Power of the Flexors, and thereby it supports the *Oesophagus*, and Vessels of the Head. Its Middle gives Way backwards to the Heart and Lungs, then it is again bended forwards, to support the *Viscera* of the *Abdomen*; afterwards a second Time turns back for the Enlargement of the *Pelvis*; and, lastly, is reflected forwards for sustaining the last great Gut. We should however observe, that notwithstanding this crooked Figure of the Spine, it is so contrived, that the Centre of Gravity of all that Part of it which sustains any considerable Weight, falls on the Middle of the common Base.

The Spine is commonly divided into *true* and *false Vertebrae*, the former constituting the superior long Pyramid with its Base inferior, while the *false Vertebrae* make the inferior shorter Pyramid, whose Base is superior.

*True Vertebrae* are the twenty-four superior Bones of the Spine, on which the several Motions of the Trunk of our Bodies are performed, from which Use they have justly got their Name.

Each of these *Vertebrae* is composed of its Body and Procellis.

The Body is the thick, spongy, anterior Part, which is convex before, concave backwards, horizontal and plain in most of them above and below; their anterior and posterior Surfaces having several remarkable Holes made in their thin external Plate, both for the firmer Connexion of the Ligaments, and for the Passage of Vessels into their cellular Substance.

Between these Bodies of each two adjoining *Vertebrae*, a Substance between the Nature of Ligament and Cartilage is interposed; which is composed of concentric curve Fibres, the exterior of which are the most solid and hardest, while those in the Centre are very soft and full of a glairy Liquor, and therefore this Substance was not improperly called by the Ancients *Ligamentum mucosum*: This is firmly fixed to the horizontal Surfaces of the Bodies of the *Vertebrae*, and therefore not only allows these Bones to recede from each other, and to be prest closer together without breaking, but serves to connect them, in which it is assisted by a strong membranous Ligament, which lines all their concave Surface, and by still a stronger Ligament that covers all their anterior convex Surface. This last it is, that *Blancard* assures us he discovered to consist of two Rows of tendinous

Fibris,



*Fibres*, decussating each other in Form of X, so as to be alternately disposed through all the *Vertebrae*, that is, the first, third, fifth, and seventh, should be similar, and the second, fourth, sixth, and eighth, distinct from the first Class, but alike among themselves.

We may lay down as a general Rule, notwithstanding some Exceptions, that the *Bodies* of the *Vertebrae* are smaller and more solid above, but as we reckon downwards, appear larger and more spongy, and that the Cartilages between them are thick, and the surrounding Ligaments strong in Proportion to the Largeness of the *Vertebrae*, and to the Quantity of Motion they are to perform: By which Disposition the greater Weight is supported on the broadest best secured Base, and the Middle of our Body is allowed a large and secure Motion, which is of considerable Benefit to us.

From each Side of the Body of each *Vertebra*, a bony Bridge is produced backwards and to a Side; from the posterior Extremity of which, one slanting Process rises, and another descends; the smooth, and what is generally the flattest Side of each of these four Processes, which are called the *oblique*, is covered with a smooth Cartilage, and the two inferior oblique Processes of each *Vertebra* are fitted to, and articulated with the two superior or ascending oblique Processes of the *Vertebra* below.

From between the superior and inferior oblique Process of each Side, the *Vertebra* is stretched out laterally in Form of a Process, that is universally named *Transverse*.

From the posterior Roots of the two oblique and of the transverse Process of each Side, a broad oblique bony Plate is extended backwards, where these meet the seventh and last Process of the *Vertebrae* takes its Rise and stands out backwards; this being generally sharp-pointed and narrow-edged, has therefore been called *Spinal Process*, from which this whole Chain of Bones has got its Name.

Besides the common Ligament which lines all the interior Surface of these Processes, as well as of the Bodies, there are particular Ligaments that connect the Processes of each two contiguous *Vertebrae*.

The Substance of the Processes is considerably stronger and firmer than that of the Bodies of the *Vertebrae*, having a thicker external Plate, and without so many large Holes made in it.

The seven Processes considered conjunctly, as forming the posterior Shares of the *Vertebrae*, are hollow at their anterior middle Part; which Concavity, joined with that at the posterior Part of the Bodies, makes one great *Foramen*, which answers to such another in the *Vertebra* above and below: Therefore the *Foramina* of all the *Vertebrae* taken together, form a long great Conduit, which is widened or straitened in Proportion to the Size of the *Medulla spinalis* which it contains.

In the lateral Bridges, which join the Bodies to the Processes of each *Vertebra*, a semicircular Notch is observable both above and below; which, exactly corresponding with others in the contiguous Bones, when the *Vertebrae* are joined, form a round Hole in each Side, between each two *Vertebrae*, through which the Nerves that proceed from the *Medulla spinalis* and the Blood-vessels pass.

The Articulations then of these true *Vertebrae* are plainly double; for their Bodies are joined by *Synchondroses*, and their oblique Processes are articulated by the third Sort of *Conglymæ*. Hence it is evident that their Centre of Motion is altered in different Positions of the Trunk: For when we bow forwards, the superior moved Part bears entirely on the Bodies of the *Vertebrae*; if we bend back, the oblique Processes support the Weight; if we recline to one Side, we rest upon the oblique Processes of that Side and Part of the Bodies; if we stand erect, all the Bodies and oblique Processes have their Share in our Support.

Hence it follows: 1. That because the Joints, of which the Spine is composed, are so numerous, the *Medulla spinalis*, Nerves, and Blood-vessels, are not subject to such Compression and Overstretching in the Motion of the Trunk of the Body, as they would be otherwise; since several *Vertebrae* must be concerned in every Motion of the Spine, and therefore a very small Curvature is made at the Conjunction of any two *Vertebrae*. 2. That an erect Posture is the surest and firmest, because the Surface of Contact of the *Fulcrum* is largest, and the Weight is most perpendicular to them. 3. That the Muscles which move the Spine act with greater Force in bringing the Trunk to an erect Posture than in drawing it to any other: For in bending forwards, back, or to a Side, the Muscles which perform any of these Actions are nearer the Centres of Motion; consequently the Lever, with which they act, is shorter than when the Centre of Motion is on the Part of the *Vertebrae* opposite to that where these Muscles are inserted, which is the Case in raising the Trunk. This is extremely necessary, since in the Deflexions of the Spine

from a perpendicular Bearing, the Weight of the Body soon inclines it which Way we design; whereas in raising us erect, this great Weight must be more than counteracted. 4. In calculating the Force exerted by the Muscles which move the Spine, we should, with *Borelli* and *Parent*, always make Allowance for the Action of the Cartilages between the *Vertebrae*, which must, in every Motion from an erect Posture, be stretched in one Side, and compressed on the other, to both which they will resist; whereas, in raising the Trunk, these Cartilages will assist by their springy Force. 5. We are hence naturally led into the Reason of the *Phænomenon* observed by Mr. *Wasse*, that our Height of Stature is increased in the Morning, and diminished at Night: For the intermediate Cartilages of the *Vertebrae* pressed all Day long by the Weight of our Body, in the Evening become more compact and thin; but when in the Night they are relieved from this Pressure, they again expand themselves to their former Thickness; and seeing the Bulk of any Part must vary according to the different Distension or Repletion of the Vessels composing it, we may understand how we become taller after a plentiful Meal, and decrease after Fasting or Evacuations, which Difference the *Abbé Fontenu* has proved to depend mostly, if not solely, on the different Thickness of these Cartilages. 6. From the different Articulations of the Bodies and oblique Processes of the *Vertebrae*, and the different Strength of the Ligaments, it is plain that they are formed so as to allow a much larger Motion forwards than backwards; this last being of much less Use, and might be dangerous by overstretching the large Blood-vessels that are contiguous to the Bodies of the *Vertebrae*.

The *Vertebrae* at the ordinary Time of Birth consist of three bony Pieces, connected by Cartilages; that is, the Body, which is not fully ossified; and a long curved Bone of each Side, on which we see a little Share of the bony Bridge, the oblique Processes complete, the beginning transverse Processes, and the oblique Plate, but no spinal Process; so that the Teguments might be in no Danger of being hurt by the sharp Extremities of these spinal Processes, as they would be, if there were any such sharp bony Processes, while a Child is in the bended Posture it remains in in the Womb, nor by the Pressure which it undergoes in the Birth.

From this general Mechanism of the Spine, an Account is easily deduced of all the different preternatural Curvatures the Spine is capable of: For if one or more *Vertebrae* are of unequal Thickness in opposite Sides, the Spine must be reclined over to the thinner Side; which now sustaining the greatest Share of the Weight, must still be more compressed, consequently hindered from extending itself in Proportion to the other Side, which, being too much freed of its Burden, has Liberty to enjoy a luxuriant Growth. The Causes, on which such an Inequality of Thickness in different Sides of the *Vertebrae* depend, may vary: For either it may be owing to an Overdistension of the Vessels of one Side, and from thence a preternatural Increase of the Thickness of that Part; or, which more commonly is the Case, it may proceed from an Obstruction of the Vessels, by which the Application of proper Nourishment to the bony Substance is hindered, whether that Obstruction depends on the faulty Disposition of the Vessels or Fluids, or if it is produced by an unequal mechanical Pressure, occasioned by a paralytic Weakness of the Muscles and Ligaments, or by a spasmodic Overaction of the Muscles on any Side of the Spine, or by a Person's continuing long, or putting themselves frequently into any particular Posture, declining from the erect Posture: In all these Cases, one common Effect will follow, that is, the *Vertebrae* turn thick on the Side where the Vessels are free, and remain thin on the other Side where the Vessels are straitened or obstructed. Whenever any morbid Curvature is thus made, almost necessarily a second Turn, but in an opposite Direction to the former, must be formed. Both because the Muscles on the convex Side of the Spine being stretched, must have a stronger natural Contraction to draw the Parts to which their Extremities are fixed, and that the Patient will make Efforts to keep the Center of Gravity of his Body perpendicular to its Base, that the Muscles may be relieved from a constant violent contractile State, which always creates Uneasiness and Pain.

When once we understand how these crooked Spines are produced, there will be little Difficulty in forming a just Prognosis of our Patient's Disease, and a proper Method of Cure may be contrived, which must vary as to the internal Medicines, according to the different Causes on which the Disease depends; but one general Indication must be pursued by Surgeons, which is to counteract the bending Force, by increasing the Compression on the convex Part of the Curvature, and diminishing it on the concave Side. The Manner of executing which in particular Cases must be very different, and requires a very particular Examination of the Circumstances both of the Disease and Patient. In many such Cases



I have found some simple Directions as to Postures in which the Patients Body should be kept, of very great Advantage.

Hence also it is easy to deduce the Reason of old People generally bowing forwards, and at last being incapable to raise their Spine erect; since the Cartilages shrivel in becoming more solid: And as this must happen most and soonest where these Gristles are least stretched and extended, therefore this Curvature is generally first most remarkable in the *Vertebrae* of their Back, or they become round-shoulder'd.

Tho' the *true Vertebrae* agree in the general Structure which I have hitherto described, yet because of several Specialities proper to a particular Number, they are commonly divided into three Classes, that is, *Cervical*, *Dorsal* and *Lumbar*.

The *Cervical* are the seven superior *Vertebrae*; which are easily distinguished from the rest by these Marks. They are all, except the first, of near an equal Breadth. Their Bodies are smaller and more solid than any others, and flattened on the Fore-part, to make Place to the *Oesophagus*; or rather this flat Figure is owing to the Pressure of that Pipe, and to the Action of the *longi Colli* and anterior *recti* Muscles. The posterior Surface, which is also flat, is generally rough, or has small Processes rising from it, where the Ligaments are fixed. The superior Surface of the Bodies of each *Vertebra* is made hollow, by a slanting thin Process being raised on each Side; and the inferior Surface is also excavated, but in a different Manner from the former; for the posterior Edge is raised a little, and the anterior is produced a considerable Way. Whence we see how the Cartilages between those Bones will be more firmly connected, and the Articulation of any two *Vertebrae* will be more secure.

The Cartilages between these *Vertebrae* are thicker, especially in respect of their Bulk, than those belonging to the *Vertebrae* of the Thorax, because of the larger Motion that is allowed here; and they are thickest at their Fore-part, which is one Reason of the *Vertebrae* advancing forward as they descend.

The oblique Processes of these Bones of the Neck more justly deserve that Name than those of any other *Vertebrae*.

They are situated slanting, the superior Processes having their smooth, and almost flat Surfaces, facing obliquely backwards and upwards, and the inferior oblique Processes, with these Surfaces, facing obliquely forwards and downwards.

The transverse Processes of these *Vertebrae* are framed in a different Way from those of any other Bones of the Spine: For besides the common Process rising from between the oblique Processes of each Side, there is a second that comes out from the Side of the Body of the *Vertebrae*; and the two, after leaving a circular Hole for the Passage of the cervical Artery and Vein, being united, are considerably hollowed at their upper Part, with rising Sides to protect the Nerves that pass in the Hollow; and at last each Side terminates in a tuberculous Point, for the Insertion of Muscles.

The spinal Processes of these cervical Bones stand pretty strait backwards, are shorter than those of any other *Vertebrae*, and are forked or double at their Extremity; and hence allow a more convenient Insertion to the Muscles, and a larger Motion backwards.

The Holes between the bony cross Bridges, for the Passage of the Nerves from the *Medulla spinalis*, have their largest Share formed in the lowest of the two *Vertebrae*, to which they are common.

The Substance of the cervical *Vertebrae*, especially of their Bodies, is not so porous or tender as of the other two Classes.

So far the cervical *Vertebrae* agree in their general Characteristics, but still have some particular Differences, which oblige us to consider them separately.

The first, from its Use of supporting the globular Head, has got the Name of *Atlas*; and by several Authors is called *Epistrophe*, from the Motion it performs on the second.

The *Atlas*, contrary to all the other *Vertebrae* of the Spine, has no Body; but instead of it there is a bony Arch; in the anterior convex Part of which, a small Rising appears; where the *Musculi longi colli* are inserted; and on each Side of this Protuberance a small Cavity may be observed, where the *Recti interni minores*, commonly (tho' wrongly) ascribed to *Couper*, take their Rise. The superior and inferior Parts of the Arch are rough and unequal, where the Ligaments that connect this *Vertebra* to the *Os occipitis* and second *Vertebra* are fixed. The posterior Part of the Arch is concave, smooth, and covered with a Cartilage in a recent Subject, to receive the Tooth-like Process of the second *Vertebra*. This Hollow makes the Passage for the *Medulla spinalis* seem much larger in this *Vertebra* than in any other. On each Side of this Concavity a small rough Sinuosity may be remarked, where the Ligaments going to the Sides of the Tooth-like Process of the following *Vertebra* are fastened; and on each Side a small rough Protuberance and Depression is observable, where the transverse Ligament, which secures the Tooth-like

Process in the Sinuosity, is fixed, and hinders that Process to injure the *Medulla spinalis* in the Flexions of the Head.

The *Atlas* has no more spinal Process than Body; but instead of it there is a large bony Arch, that the Muscles which pass over this *Vertebra* at that Place, might not be hurt in extending the Head back. On the posterior and superior Part of this Arch there are two Depressions, where the *Recti possici minores* take their Rise; and at the inferior Part are two other Sinuosities, into which the Ligaments which connect this Bone to the following are fixed.

The superior oblique Processes of this *Atlas* are large and hollow, rising more in their external than internal Brim; by which their Articulations with the *Condylode* Processes of the *Os occipitis* are firmer; for, as I remarked from *Galen*, in the Description of these *Condyles*, they cannot slip to either Side; and then this Protuberance serves to defend the *Fossa* or Channel formed behind the external and posterior Part of each of them, in which the vertebral Arteries make the circular Turn, as they are about to enter the great *Foramen* of the occipital Bone, and where the tenth Pair of Nerves go out. The inferior oblique Processes are large, extended from within outwards and downwards, and are slightly hollowed: So that this first *Vertebra*, contrary to the other six, receives the Bones with which it is articulated both above and below.

The transverse Processes are not much hollowed or forked, but are longer and larger than of any other *Vertebra* of the Neck, to serve for the Origin and Insertion of several Muscles. Those of the Muscles fixed to the transverse Processes that serve to move this *Vertebra* on the second, gain a considerable Lever to act with, by the Distance which each of these long Processes make from the Axis of Revolution.

The *Condyles* of the *Os occipitis* move forwards and backwards in the superior oblique Processes of this *Vertebra*, by means of their double *Arthrodia*, which makes the third Species of *Ginglymus*; but very little Motion can here be allowed to either Side, and there must be still less circular Motion, which the Head obtains principally by the Circumvolution of the *Atlas* on the second *Vertebra*.

In new born Children this *Vertebra* has only the two lateral Pieces ossified, the anterior Arch, which it has instead of a Body, being cartilaginous.

The second *Vertebra* of the Neck is called *Dentata*, from the Tooth-like Process on the superior Part of its Body. Some Authors call it *Epistrophe*; but improperly, since this Designation is only applicable to the first, which moves on this as on an Axis.

The Body of this *Vertebra* is somewhat of a pyramidal Figure, the inferior Part being large, and produced, especially at its Fore-side, to enter into a Hollow of the *Vertebra* below; while the superior Part has a square Process, with a small Point standing out from it. This it is that is imagined to resemble a Tooth; and has given Name to the *Vertebra*. The anterior Surface of this Process is cylindrical, smooth, and covered with a Cartilage, where it plays in the Hollow of the anterior Arch of the first *Vertebra*. The posterior Surface is much the same Way disposed, for moving on the cross Ligament, which is cartilaginous in the Middle. From the Sides of the *Processus dentatus*, the Ligaments go off to fix it to the first *Vertebra*; and from its Point a strong one is sent out to the *Os occipitis*. Immediately below the two lateral Ligaments, a Sinuosity may be observed on each Side, where the first vertebral Nerves escape.

The superior oblique Processes of this *Vertebra dentata* are large, very near in a horizontal Position, and slightly convex, to be adapted to the inferior Processes of the first *Vertebra*. A moveable Cartilage is said by some Authors to be interposed between these oblique Processes of the first and second *Vertebra*; but I could never find it. The inferior oblique Processes of this *Vertebra dentata* answer exactly to the Description given of those common to all the cervical *Vertebrae*.

The transverse Processes differ from those of the other cervical *Vertebrae* in this, that they are shorter, very little hollowed at their superior Part, and not forked at their Extremities; and that the Canals through which the cervical Arteries pass, are about the middle Substance of the Process reflected outwards, so as the Course of these Vessels may be directed towards the transverse Processes of the first *Vertebra*; which are further produced, and therefore make a Turn of the Arteries necessary: But if this had been any where in such a moveable Part as the Neck is, and the Artery not defended by a Bone, and fixed to that Bone, scarce a Motion could be performed without the utmost Hazard of Compression, and a Stop put to the Course of the Liquids, with all the Train of its ill Consequences. Hence we observe this same Mechanism several Times made Use of, when there is any Occasion for a sudden Curvature of a large Artery. This is the third remarkable Instance of it we have seen: The first was the Passage of the *Carotides* through the *Cassa temporum*



rum; and the second was that lately described in the vertebral Arteries, turning round the oblique Processes of the first Vertebra, to come at the great *Foramen ossis occipitis*.

The spinal Process of this *Vertebra dentata* is thick, strong and short, to give sufficient Origin to the *Musculi recti majores*, and *obliqui inferiores*, and to prevent the Contusion of these Muscles in pulling the Head back.

This second *Vertebra* consists at the Birth of four bony Processes; for besides the three which I already mentioned as common to all the Vertebrae, the Tooth-like Process of this Bone is begun to be ossified in its Middle, and is joined as an Appendix to the Body of the Bone. Whence we may deduce one good Reason, why Midwives ought to apply Stay-bands to keep the Heads of new-born Children from falling too far backwards, till the Muscles attain Strength enough to be able to prevent that dangerous Motion.

When we are acquainted with the Structure and Articulation of the first and second Vertebrae, and know exactly the Strength and Connexion of their Ligaments, there is no Difficulty in understanding the Motions that are performed upon or by the first, tho' this Subject was formerly Matter of hot Dispute among some of the greatest Masters of Anatomy. 'Tis none of my Purpose at present to enter upon a Detail of the Reasons advanced by either Party, but to explain the Fact as any one may see it who will remove the Muscles, which in a recent Subject hinder the View of these two Joints, and then will turn the Head into all the different Positions it is capable of. This done, he will observe the Head to move forwards and back on the first *Vertebra*, as was already said; while this *Atlas* performs the *Circumgyration* upon the second *Vertebra*, the inferior oblique Processes of the first *Vertebra* shuffling easily in a circular way on the superior oblique Processes of the second, and its Body or anterior Arch having a Rotation on the Tooth-like Process, by which the perpendicular Ligament that is sent from the Point of the Tooth-like Process to the occipital Bone is twisted, while the lateral Ligaments that fix the *Processus dentatus* to the Sides of the first *Vertebra* are very differently affected, for the one upon the Side towards which the Face is turned by the *Circumgyration* is much shortened and lax, while the opposite one is stretched and made tense, and yielding at last no more, prevents the Head from turning any further round on this *Axis*, so that these lateral Ligaments are the proper *Moderators* of the *Circumgyration* of the Head here, which must be larger or smaller as these Ligaments are stronger or longer, and more or less capable of being stretched. Besides this Revolution on this *Axis*, the first *Vertebra* can move a small Way to either Side, but is prevented from moving backwards and forwards, by the anterior Arch of the first *Vertebra*, and by the cross Ligament which is closely applied to the Tooth-like Process. The Motion forwards here would have been of very bad Consequence, as it would have brought the Beginning of the *Medulla spinalis* upon the Point of the Tooth-like Process.

The rotatory Motion of the Head is of great Use to us on many Accounts, by allowing us so quickly to apply our Organs of Sense to Objects, and the *Axis* of Rotation was altogether proper to be here; for if it had been at a greater Distance from the Head, the Weight of the Head, if it had at any time been removed from a perpendicular Bearing to the small very moveable Joint, and thereby had acquired a long Lever, would, at every Turn inconsiderately performed, have broke the Ligaments to Pieces; or these Ligaments must have been formed much stronger than could well have been connected to such small Bones: Neither could this circular Motion be performed without Danger on the first *Vertebra*, because the immoveable Part of the *Medulla oblongata* is so near, as at each large Turn the Beginning of the *Medulla spinalis* would have been in Danger of twisting, and suffering by the Compression this would make on its tender Fibrils. On the whole, we may be convinced, that the quick circular Motion of our Head is of good Use to us; and that this second *Vertebra* of the Neck is altogether proper, both by its Structure and Situation, for being the *Axis* on which that Motion is to be performed.

But then I must take notice that the lateral, or the *Moderator* Ligaments, confine the Motion of this Joint so much, that tho' it may serve us in several Occasions, yet we often require to turn our Faces so far round as this Joint could never allow, without the greatest Danger of immediately twisting the spinal Marrow too much, and also of the oblique Processes of the *Vertebra* being luxated; therefore, in the large Turns of our Face backwards, we increase the Rotation by a little Assistance from each of the Vertebrae of the Neck, from the Vertebrae of the Loins, and from most of the Joints of the lower Extremities. This Combination of a great many Joints towards the Performance of one Motion, is also to be observed in several other Parts of the

Body; notwithstanding such Motions being generally said to be performed by some one Joint only.

The third Vertebra of the Neck is by some called *Axis*; but this Name is given without any Reason to this third Vertebra, while it might be applied very properly to the second. This third, and the three below have nothing particular in their Structure, but all their Parts come under the general Descriptions formerly given, each of them being larger as they descend.

The seventh Vertebra of the Neck comes near to the Form of those of the Back, having the upper and lower Surfaces of its Body less hollow than the others, the oblique Processes are more perpendicular, neither spinal nor transverse Processes are forked. This seventh and the sixth Vertebrae of the Neck have the Hole in each of their transverse Processes more frequently divided by a small cross Bridge, that goes between the cervical Vein and Artery, than any other Vertebrae.

The twelve *Dorsal* may be distinguished from the other Vertebrae of the Spine, by these proper Characteristics. Their Bodies are of a middle Size, betwixt those of the Neck and Loins; are more convex before than either of the other two Sorts, and flattened laterally by the Pressure of the Ribs, which are inserted into small Cavities formed in their Sides. This Flattening on their Sides, which makes the Figure of these Vertebrae near an half Oval, is of good Use, as it affords a firmer Articulation to the Ribs, allows the *Trachea arteria* to divide at a smaller Angle, and the other large Vessels to run secure from the Action of the vital Organs. The posterior Part of these Bodies is more concave than in any of the other two Classes. Their superior Surfaces are all horizontal, with their Edges tipped with *Epiphyses*, which *Fallopian* alleges are only some Parts of the intervening Ligaments become bony. The Cartilages interposed between the Bodies of these Vertebrae are thinner than in any other of the true Vertebrae, and contribute to the Concavity of the Spine here at its Fore-part, by their being thinnest near the anterior Edge of the Vertebrae.

The oblique Processes are placed almost perpendicular, the superior slanting very little forwards, and the inferior as much back. Neither they, nor the oblique Processes of the Bones of the Neck, have as much Convexity or Concavity as is worth remarking. At their Roots a small Roughness is observable, where the Ligaments that surround their Articulations are inserted; and on the posterior Surface of the Bone, between the Processes of opposite Sides, several sharp little Processes stand out, where strong Ligaments are fix'd.

The transverse Processes of the *dorsal Vertebrae* are long, thicker at their Extremity than in the Middle, and turned obliquely backwards, which may be owing to the Pressure of the Ribs, the Tubercles of which are inserted into a Depression near the Extremity of these Processes.

The spinal Processes are long, small-pointed, and run sloping down; and at the superior Part of their posterior Surface, a small Ridge rises, which is received by a small Channel in the anterior Surface of the spinal Process immediately above, which is connected to it by a Ligament. Hence little Motion can be allowed of here, lest the Heart and Lungs should be disturbed in their Actions.

The Conduit of the *Medulla spinalis* is more circular, but corresponding to the Figure of that Cord, smaller here than in any other *Vertebra*; and a larger Share of the Holes in the bony Bridges, for the Transmission of the Nerves, is formed in the superior than in the inferior *Vertebra*.

The Bodies of the four superior *dorsal Vertebrae* deviate from the Rule of the Vertebrae becoming still larger as they descend, for the first of these four is the largest, and the other three inferior gradually become smaller, to allow the *Trachea* and large Vessels to divide at smaller Angles.

The two uppermost Vertebrae of the Back, instead of being very prominent forwards, are flattened by the Action of the *Musculi longi colli* and *recti majores*.

The proportional Magnitude of the two little Depressions in the Body of each *Vertebra* for receiving the Heads of the Ribs, seems to vary in respect to each other, in this manner; the Depression on the superior Edge of each *Vertebra*, decreases as far down as the fourth, and always after that increases.

The transverse Processes are longer in each lower *Vertebra* to the seventh or eighth, with their smooth Surfaces, for the Tubercles of the Ribs, facing gradually more downwards; but afterwards as they descend become shorter, and the smooth Surfaces are directed more upwards.

The spinal Processes of the *Vertebrae* of the Back become gradually longer and more slanting from the first, as far down as the eighth or ninth Vertebra, from which they manifestly turn shorter and more erect.

The



The first *Vertebra*, besides an oblong Hollow in its inferior Edge, that assists in forming the Cavity wherein the second Rib is received, has the whole Cavity for the Head of the first Rib formed in it.

The second has the Name of *Axillary*, without any Thing particular in the Structure of it.

The eleventh often has the whole Cavity for the eleventh Rib in its Body, and wants the smooth Surfaces on each transverse Process.

The twelfth always receives the whole Head of the last Rib, and has no smooth Surface on its transverse Processes, which are very short. The smooth Surfaces of its inferior oblique Processes face outwards as the *Lumbar* do. And indeed we may say in general, that the superior *Vertebrae* of the Back come nearer the Resemblance of those of the Neck, while the inferior are liker the *Lumbar*.

The inferior and last Class of the true *Vertebrae* is the *Lumbar*, which five Bones may be distinguished from any others by these Marks; 1. Their Bodies, though of a circular Form at their anterior Part, are somewhat oblong from one Side to the other, which may be occasioned by the Pressure of the large Vessels, and of the *Viscera* contiguous to that Fore-part. The *Epiphyses* on their Edges are larger, and therefore the superior and inferior Surfaces of their Bodies are more concave than in the *Vertebrae* of the Back. 2. The Cartilages between these *Vertebrae* are much the thickest of any, and render the Spine convex within the *Abdomen*, by their greatest Thickness being anterior. 3. The oblique Processes are strong and deep, those in opposite Sides being almost placed in parallel Planes, the superior, which are concave, facing inwards; and the convex inferior ones outwards, and therefore these *Vertebrae* do plainly receive each other above, and are received below, which is not so evident in the other two Classes already described. 4. Their transverse Processes are small, long, and near erect, for allowing a large Motion to each Bone, and sufficient Insertion to Muscles, and for supporting and defending the internal Parts. 5. Betwixt the Roots of the superior oblique and transverse Processes, a small Protuberance may be observed, where some of the Muscles that raise the Trunk of the Body are inserted. 6. Their spinal Processes are strong, strait, and horizontal, with broad flat Sides, and a narrow Edge above and below, this last being depressed on each Side by Muscles. And at the Root of these Edges, we see rough Surfaces for fixing the Ligaments. 7. The large Canal for the *Medulla spinalis* is rather larger here than in the Back. 8. The Holes for the Passage of the Nerves are more equally formed out of both the contiguous *Vertebrae* than in others, but the superior furnishes however the larger Share of it.

Both transverse and spinal Processes of the middlemost *Vertebra* of the Loins are longest and thickest, and on each Side of that they decrease, so that these Processes of the first and fifth are the least, which is very necessary, especially as to the transverse Processes of these two *Vertebrae*, lest if they had been long, they had struck on the Ribs or *Ossa Ilium* or bruised the interposed Muscles in the Deflexions of the Spine to a Side.

The *Epiphyses* round the the Edges of the Bodies of these *Vertebrae* are most raised in the two lowest, and consequently make them appear hollower in the Middle, than the others are.

The Body of the fifth *Vertebra* is rather thinner than that of the fourth. The spinal Process of this fifth is smaller, and the oblique Processes face more backwards and forwards, than in any other *Lumbar Vertebra*.

From the whole, we may deduce the Uses of the true *Vertebrae* in these few general Heads. To give us an erect Posture; to allow a sufficient and secure Motion to the Head, Neck, and Trunk of the Body on all necessary Occasions; and to support and defend the *Viscera* and other soft Parts.

After considering the Structure of the particular *Vertebrae*, and their mutual Connexion, we may observe in each a solicitous Care taken that they shall with great Difficulty be disjoined; for their Bodies enter either so into each other, as to prevent their being displaced any how, as in the *Vertebrae* of the Neck; or these Bodies are prop'd on all Sides, as these of the Back are by the Ribs; or their Surfaces of Contact are so broad, and the Ligaments so strong and firmly connected, as to render the Separation almost impracticable, as in the Loins; while the Depth and Articulation of the oblique Processes are exactly proportioned to the Quantity of Motion the other Parts of the Bone will allow, or the Muscles can perform: Yet as these oblique Processes are small, and therefore not capable of so secure a Conjunction as the larger Bodies, they may sooner yield to a disjoining Force; but then their Dislocation is not of near so bad a Consequence; for by

their being displaced, the Muscles, Ligaments, and *Medulla Spinalis*, are indeed stretched; whereas, when the Body of the *Vertebra* is removed out of its Place, the *Medulla Spinalis* must be completely compressed, or intirely destroyed.

The *False Vertebrae* compose the under Pyramid of the Spine. They are distinguished from the former justly enough by this Epithet of *False*; because tho' each Bone resembles the true *Vertebrae* in Figure, yet none of them partake of their Use of serving in the Motion of the Trunk of the Body, all of them being intimately united, except at one Part where there is a moveable Joint; whence the common Division of these false *Vertebrae* into two Bones, *Os Sacrum* and *Coccygis*. See *Coccyx*, and *SACRUM Os*. *Monro's Osteology*.

The Cartilages of all the *Vertebrae* in general, are of two Kinds; one proper to each *Vertebra*, the other common to the two *Vertebrae* that lie next each other: The first I term Cartilages of Articulation, the others, Cartilages of Symphysis.

The proper articular Cartilages of each *Vertebra* of the whole Spine are those four which cover the Surfaces of the four small articular Apophyses. In the natural State they are very white and smooth, and much thicker than in dry Bones. Their Circumference is the same with that of the articulated Sides of the Apophyses, except in those Places where there are small superficial Notches. In the first *Vertebra* of the Neck, and *Vertebrae* of the Loins, these Cartilages are thicker than in the rest.

The two inferior articular Cartilages of the first *Vertebra*, and the two superior Cartilages of the second, seem to be disproportionate, tho' not so much as in dry Bones; and in some Subjects we find moveable or inter-articular Cartilages between the Apophyses of these two *Vertebrae*.

The first *Vertebrae* of the Neck has a small cartilaginous Incrustation in the Middle of the concave Side of its anterior Arch, answering to another on the Fore-side of the odontoid Apophysis of the second *Vertebra*; so that these two *Vertebrae* have five articular Cartilages each, besides the inter-articular ones already mentioned.

The *Vertebrae* of the Back, besides the four Cartilages of their small Apophyses, have others which do not belong to their Articulations with one another, that is, those that cover the lateral Fossulae in the Bodies of these *Vertebrae*, and the Fossulae of their transverse Apophyses, by both which they are articulated with the Ribs.

The Cartilages of Symphysis lie between the Bodies of the *Vertebrae*, one of them being contained between, and closely joined to the lower Surface of the Body of one *Vertebra*, and to the upper Surface of that next under the former; the Breadth and Circumference of them answering exactly to that of the Surfaces to which they are connected; but their Height or Thickness is different in each Class of the *Vertebrae*. In the *Vertebrae* of the Loins they are a quarter or third Part of an Inch in Thickness, according to the Stature of the Subject. In those of the Neck, they are not so thick, and the thinnest of all are those of the *Vertebrae* of the Back.

These Cartilages are not of an equal Thickness in all their Parts. Those of the Neck and Loins appear to be thickest on the Fore-side, and those of the Back rather thickest on the Backside; but these Differences are most remarkable in the *Vertebrae* that lie near the Middle of each Class.

The internal Structure of these Cartilages is different from that of all the other Cartilages of the Body; and indeed they resemble the rest in nothing but Whiteness and Elasticity. When we view their Circumferences only, they seem to be one uniform Mass, as the others generally are; but when they are divided by an Incision parallel to the Surface of the *Vertebra* to which they are joined, we see that they are made up of a great Number of cartilaginous concentrical Rings contained within each other, a small Distance being left between them. They are closest and thinnest near the Centre, and about the Middle seem to degenerate into another softer kind of Substance.

These Rings do not form an entire Circumference, being turned inward on the Backside, answerably to the posterior Slope in the Body of each *Vertebra*. They lie horizontally, one Edge being fixed to the lower Side of one *Vertebra*, and the other to the upper Side of the *Vertebra* next below the former. The Interstices between the Rings are filled with a mucilaginous Substance, less fluid than that of the Joints; and their Breadth or Height is proportionable to the Distance of the *Vertebrae* between which they lie.

Each cartilaginous Lamina taken separately, is very pliable according to its Length; but taken altogether, they are not so easily bent, partly because of their circular Figure, and partly



partly because of their Proximity and Multiplicity. They yield, however, in the Inflexions of the Spine, and their external Surface, which, in the ordinary Situation of the Spine, is even with the Surface of the Vertebrae, becomes prominent, or jets out on that Side towards which the Inflexion is made, the Cartilages being then compressed by the Vertebrae.

They likewise yield on all Sides without any Inflexion of the Spine, to the Weight of the Head and upper Extremities; but this is done by very small and imperceptible Degrees, and most of all, when the upper Parts of the Body are loaded with any exterior Weight.

They restore themselves afterwards merely by being freed from Compression; so that a Man is really taller after lying some time, than after he has walked or carried a Burden for a great while: The most natural and simple Reason that can be given for the different Heights of the same Persons at different Times, first observed in *England*, and afterwards confirmed by M. *Morand*, a Member of the Royal Academy of Sciences; being the different State of the inter-vertebral Cartilages.

The inter-vertebral Cartilages of the Neck, lying for the most part between the convex Side of one Vertebra, and the concave Side of another, are of a greater Extent in proportion to the Size of these Vertebrae than those of the Back and Loins. Without the Convexity and Hollowness in these Vertebrae, which are the least of all, the Cartilages could not have been made large enough to be able to resist Strains and great Motions.

The Vertebrae are strongly connected to each other by three Kinds of Ligaments. Each Vertebra is connected to that above and below it, by a great Number of very short and strong Ligaments, which cross each other obliquely, and are fixed round the Edges of the Body of each Vertebra.

These crucial Ligaments cover the Circumference of the inter-vertebral Cartilages, and adhere closely to them. They seem to be looser in the cervical and lumbar Vertebrae than in those of the Back, and by that means yield to the Cartilages in the different Inflexions of the Spine already mentioned.

The Bodies of all the Vertebrae from the second of the Neck to the Os Sacrum, are covered by ligamentary half Vaginae on the convex Side, in which these Vaginae are fixed, surrounding all the crucial Ligaments, and made up of ligamentary Fasciculi and Filaments, partly oblique, but mostly longitudinal.

All the Vertebrae are likewise strongly connected by a ligamentary Tube, which lines the inner Surface of the medullary Canal from the occipital Hole, to the Os Sacrum, representing a kind of long flexible Funnel, its Cavity at the upper Part being equal to that of the occipital Foramen, and ending in a small Point at the Os Sacrum.

This Ligament is made up of several Strata of longitudinal and oblique Fibres interwoven together, adhering closely to the Inside of the great Foramen in each Vertebra, by a great Number of Filaments detached from it to the porous Substance of the Vertebra.

The first Vertebra is not only fixed to the Os Occipitis by a Portion of this ligamentary Funnel, but, also, by a distinct and very strong ligamentary Covering, which surrounds and adheres very closely to that Portion of the Funnel. This Covering is fixed above, round the great occipital Foramen, where it begins to adhere to the Funnel, and below, quite round the Circumference of the first Vertebra. The second Vertebra has two Ligaments peculiar to it, one which connects the Apophysis Dentiformis to the Os Occipitis; and another transverse, which confines this Apophysis within the anterior Portion of the Cavity of the first Vertebra. The first may be termed the Occipital, and the second, the transverse Ligament of the odontoid Apophysis.

The occipital Ligament is very strong and thick, and adheres in a very singular manner to the three Planes of the Apex of the Apophysis, and is afterwards divided into two or three Portions which are fixed in the like manner, in the anterior Edge of the great occipital Foramen, and in the Inequalities of the Apophysis Basilaris near that Hole.

The transverse Ligament may be said more justly to belong to the first Vertebra, both Ends of it being inserted in the lateral Impressions of the inner Surface of that Vertebra; but is ranked among the Ligaments of the second Vertebra, because of its Use, and because of the Insertion of its middle Portion.

This thick Ligament is stretched from one Side of the inner Surface of the first Vertebra to the second about the Middle of the Foreside, its Texture is very close, and it is fixed by this Portion in the Back-Part of the Apophysis Dentiformis; and sometimes it seems to have additional Fasciculi, which adhere by one End to both Extremities, and by the other to each Side of the Apophysis.

Along the whole bony Canal of the Spine, between the Basis of each spinal Apophysis, lies a flat and very elastic Ligament, of a yellowish Colour, which fills up the posterior great Noches of the Vertebrae adhering to their Edges, and likewise to the neighbouring Portions of the Funnel or great ligamentary Tube.

Between the Extremities or Apices of the spinal Apophysis, we find small ligamentary Ropes which run from one Spine to that next it, and which are really double, though they seem to be single in the Vertebrae of the Back and Loins. In the Vertebrae of the Neck they are fixed separately to the forked Extremities of the Spines.

Between all the spinal Apophyses, from their Apices to the Middle of the Bases, lies a ligamentary Membrane going between each two Apophysis, and thereby distinguishing the Right Side of the Vertebra from the Left. There is a Ligament of the same kind between the transverse Apophyses.

These are inter-muscular Ligaments, or ligamentary Septa, which divide the Muscles of one Side from those of the other. The first Kind may be termed *Inter-Spinales*, and the other *Inter-Transversales*.

The articular Ligaments of the Spina Dorsi, are those which tie the glenoid Cavities of the first Vertebra to the Condyles of the Os Occipitis; those that join the cartilaginous Surface of the Apophysis Dentiformis, to the anterior Cavity of the first Vertebra; and those by which all the oblique or articular Apophyses are connected together.

These are all small, short, strong ligamentary Fasciculi, fixed by both Extremities, round the cartilaginous Surfaces of the Apophyses, surrounding very closely all the capsular Ligaments of these Articulations.

The vertebral Ligaments of the Ribs, or those which connect the Ribs to the Bodies, and transverse Apophyses of the Vertebra of the Back, are of the same kind, being inserted round the cartilaginous Fossulae, in the Body and Apophyses of each Vertebra.

Besides all these Ligaments of the Spina Dorsi, there is one which goes in form of a Membrane, from the Os Occipitis, all the Way to the last two Vertebrae of the Neck. It is broad at the upper Part, and from thence diminishes gradually, by its upper broad Extremity; it is fixed along the occipital Spine, and by one Edge, in the posterior Tubercle of the first Vertebra, between the two spinal *Forces* of the following Vertebrae, and in the Apices of the spinal Apophyses of the lowest Vertebrae; but the other Edge is loose. This is a true inter-muscular Ligament, and I give it the Name of *Ligamentum Cervicale Posterius*.

There are two lateral Ligaments of the same Kind fixed to the transverse Apophyses of the Vertebrae of the Neck.

#### THE MUSCLES OF THE SPINE.

The Muscles which lie along the Spine, the greatest Part whereof serve for the Motions of the Neck, Back and Loins, have, by the greatest Anatomists, been thought very difficult to be well dissected and clearly described, especially those of the Back. All these Muscles are very complex, interwoven with each other, and multiplied in various Manners; so that it becomes necessary either to make their Number much greater than that of the Vertebrae, or to reduce them to a small Number of long Muscles intersected at different Places.

*Steno*, in order to facilitate the Knowledge, Dissection and Description of these Muscles, thought proper to rank them in the following manner. By Vertebral Muscles he understands those which are fixed in the Vertebrae alone; and he distinguishes them all into *Recti* and *Obliqui*. The *Recti* are those which run parallel to the Medulla Spinalis, or whose Direction is longitudinal. The *Obliqui* are those which run obliquely between the spinal and transverse Apophyses.

He divides the *Recti* into Middle and Lateral; the middle *Recti* are those which are fixed to the spinal Apophyses; the lateral, those fixed to the transverse Apophyses.

He moreover divides all these Muscles into Simple and Compound; the Simple being those which are fixed in two Vertebrae only; the Compound, those fixed in are more than two.

The *Obliqui*, according to him, are of two Kinds; some run up from the transverse to the spinal Apophyses, approaching each other; and some run up from the spinal to the transverse Apophyses, diverging from each other. The first Sort he terms *ad medium vergentes*; the second, *a medio recedentes*. These Terms are borrowed from Optics; and accordingly these two Kinds of Muscles might be named converging and diverging Muscles. Lastly, he adds, that several Muscles of the first kind go from one transverse to several spinal



spinal Apophyses, and from several transverse to one spinal Apophysis.

According to this Account of the Vertebral Muscles, the ancient Terms *Spinales Transversales* and *Semi-spinales*, may still be applied to them, understanding by *Spinales* those Muscles which are wholly fixed in the spinal Apophysis; by *Transversales*, those which are wholly fixed in the transverse Apophyses; and by *Semi-spinales*, those which are fixed in the spinal Apophysis by one Extremity only. At present the two Kinds of oblique vertebral Muscles are better expressed by the two compound Terms *Transverso-Spinales* and *Spino-Transversales*.

It is, however, necessary to retain the general Names of *Vertebrales Recti*, and *Vertebrales Obliqui*, because though the Terms already mentioned agree very well to the posterior Obliqui, they cannot be applied to the anterior Obliqui, one End of which is fixed not in the spinal Apophysis, but in the Bodies of the Vertebrae.

The small simple Muscles which go between two Vertebrae, may be termed *Vertebrales Minores*; and the large compound Muscles that reach several Vertebrae, *Vertebrales Majores*; both Sorts being afterwards divided into *Spinales* and *Transversales Majores* and *Minores*. The small Muscles are likewise called *Inter-spinales* and *Inter-transversales*; and as there are some small oblique Muscles that cannot be said to reach either the transverse or spinal Apophyses, these may be termed simply *Inter-vertebrales*.

The *Transverso-Spinales* that go from several transverse to one spinal Apophysis, are disposed in this manner: The Portion that comes from the most distant transverse Apophysis, is inserted in the Extremity of the spinal Apophysis, the Portion from the next transverse Apophysis is inserted more laterally; and the same Rule holds in all the other Portions, except in that which comes from the transverse Apophysis, which is nearest the spinal Apophysis.

This last Portion is not fixed in the spinal Apophysis, but rather in its Root or Basis, and likewise very near the Basis of the transverse Apophysis; so that it is more properly *Inter-vertebralis* than *Transverso-spinalis*. Thus in the *Transverso-spinales*, that go from the ninth, eighth, seventh and sixth transverse Apophyses of the Back, to the fifth spinal Apophysis of the same Class, we find that the last and smallest is fixed in the Basis of the sixth Transverse and of the fifth spinal Apophysis.

The *Transverso-Spinales* which go from one transverse to several spinal Apophyses, are disposed in this manner. The Portion that goes from the Basis, or near the Basis of the transverse Apophysis, is fixed either in or near the Basis of the spinal Apophysis immediately above it. The next Portion which is more distant from the Basis of the transverse Apophysis, runs up beyond the next spinal Apophysis, and is inserted in that above it, a little further from the Basis.

The other Portions observe the same Order, that which comes from the Apex of the transverse Apophysis, being inserted in the Apex of the most distant spinal Apophysis. From this Disposition we see, that the most superior vertebral Muscles which go from one transverse to several spinal Apophyses, are the most inferior of those which go from several transverse to one spinal Apophysis.

It must be observed, that in speaking of the oblique vertebral Muscles, I consider their Direction from below upward, and not from above downward; because the inferior Vertebrae commonly support those above them, except when a Person stands upon his Head, with his Feet erect, in which Case the superior Vertebrae sustain the inferior.

We ought likewise to remark, that in speaking of these Muscles the Term *Transversalis* is more proper than *Transversus*, which last points out a certain Direction very different from that which these Muscles have; whereas the other marks the Relation which they have to the transverse Apophyses.

Besides the Vertebral Muscles properly so called, several other Muscles, not inserted wholly in the Vertebrae, serve to move them. Some of the Ancients called these *Semi Spinales*, to distinguish them from those they termed *Spinales*, which included all the vertebral Muscles; and therefore as we have termed these *Vertebrales*, the other may be named *Semi Vertebrales*.

Among the *Vertebrales* properly so called, some from their Insertions seem to be common to the Neck and the Back, some to the Back and Loins; but for Distinction Sake, I reckon among those of the Neck, not only the Muscles entirely fixed in the Vertebrae thereof, but, also, those whose superior Insertion is in the seventh Vertebra of the Neck, though all their other Insertions be in those of the Back; and I observe the same Method with respect to the Loins.

All these Muscles vary very much in their Insertions and reciprocal Communications; by which last they are often so much confounded together, that it is a very difficult Matter to distinguish them for those who are not previously acquainted

with them. In general, they are more easily distinguished in Children than in Adults, and in Adults than in very aged Persons.

The Muscles which move the *Vertebrae* of the Neck, are, by *Winslow*, reduc'd to twelve, six on each Side, which are,

1. The *Longus Colli*.
2. *Transversalis Colli Major*.
3. *Transversalis Gracilis, sive Collateralis Colli*.
4. *Semi-Spinalis, sive Transverso-Spinalis Colli*.
5. *Spinalis Colli parvi, sive Inter Spinales*.
6. *Transversales Colli minores sive, Inter Transversales*.

See a Description of these Muscles, under the respective Articles of their Names.

The *Spinales Minores*, and *Transversales Minores*, are here reckoned collectively; for if we take them separately, there are six or seven of each Sort on each Side of the Neck; neither is the Number of them always the same. The *Transversalis Gracilis* has often been looked upon as a Portion of that long muscular Mass termed *Longissimus Dorsi*. It has likewise been taken by some for the *Cervicalis Descendens* of *Diemerbroek*; and by others it has been called *Accessorius Stenonis*.

We ought likewise to reckon among the Muscles of the Neck, the *OBLIQUUS MAJOR*, and *RECTUS MINOR*; which see under their Names.

The Muscles which move the *Vertebrae* of the Back and Loins would amount to a much greater Number, and be much more difficult to conceive, than those of the Neck, were they to be reckoned separately as vertebral, or semi-vertebral Muscles. It is therefore proper to reduce them to a collective Number, which may conveniently enough be fixed to twenty-four, twelve on each Side, that is,

1. *Sacro Lumbaris*.
2. *Longissimus Dorsi*.
3. *Spinalis Dorsi Major*.
4. *Spinales Dorsi Minores*.
5. *Transversalis Dorsi Major*.
6. *Transversales Dorsi Minores*.
7. *Semi Spinalis, sive Transverso Spinalis Dorsi*.
8. *Semi Spinalis, sive Transverso Spinalis Lumborum Sacer Veterum*.

- 9, 10. *Spinales & Transversales Lumborum*.
11. *Quadratus Lumborum, sive Lumbaris Externus*.
12. *Coccygæi*.

The *Vertebrae* of the Back, and especially those of the Loins may likewise be moved by the Muscles of the Abdomen. The inferior Portion of the *Longus Colli* may contribute something to the Motion of the upper *Vertebrae* of the Back; the *Psoas* to that of the *Vertebrae* of the Loins, and the *Gluteus Maximus* to that of the *Os Coccygis*.

The Descriptions and Uses of these Muscles may be found under their respective Names, except those of the Muscles of the *Os Coccygis*, which are omitted under the Article *Coccyx*.

These are small, thin, radiated Muscles, lying on the inner or concave Side of the *Os Sacrum*, and neighbouring Parts of the Pelvis: They are four in number, two on each Side, whereof one is placed more forward, the other more backward; for which Reason the first may be termed *Coccygæus anterior, sive Ischio-Coccygæus*; the other *Coccygæus posterior, sive Sacro-Coccygæus*.

The *Coccygæus anterior* is fixed by a broad Insertion in the anterior Portion of the small transverse Ligament at the upper Part of the foreman Ovale of the *Os Innominatum*, which is no more than a particular Fold of the great transverse Ligament of the Pelvis: From thence it runs between this great Ligament and the *Musculus Obturator Internus*, with which it is often confounded by Anatomists; and contracting in Breadth, it is inserted in the lower Part of the *Os Coccygis*.

The *Coccygæus posterior*, or *Sacro-Coccygæus*, is fixed to the inner or concave Edge of the two first *Vertebrae* of the *Os Sacrum* to the inner and lower Edge of the *Ligamentum Sacro-Sciaticum*, and to the Spine of the *Os Ischium*: From thence contracting in Breadth, it is inserted in the Inside of the *Os Coccygis* above the former Muscle. *Winslow*.

SPINA ACIDA. See *BERBERIS*.

SPINA ACUTA. A Name for the *Mespilus*; *Apil folio*; *sylvestris*; *spinosa*; *sive Oxycantha*; and, also, for the *Mespilus*; *spinosa*; *Pyri folio*.

SPINA ALBA. A Name for the *Mespilus*; *Apil folio*; *sylvestris spinosa, sive Oxycantha*; and, also, for the *Echinops*, *folio Acanthi aculeati tenuiter laciniato, flore albo*.

SPINA ARABICA. Offic. *Carduus spinosissimus sphaerocephalus rigidis aculeis armata*. C. B. 385. *Carduus spinosissimus sphaerocephalus, Cardui Arabici nomine missus*, Park. Theat. 978. ARABIAN THISTLE.

[ \* H h h ]

It



It is easily naturaliz'd in Gardens, and flowers in Summer. The Root and Leaves are used.

The *Spina Arabica* seems to be of a like Nature with the *Spina Alba*, for it is astringent, and good for the Fluor Uterinus, Vomiting of Blood, and other Kinds of Fluxes, as is the *Spina Alba* beforementioned. *Dioscorides Lib. 3. Cap. 15.*

The *Spina Arabica* of *Dioscorides* is to be reckon'd among ambiguous Plants, and no Wonder, since all that he says of it is, that it appears to be of the Nature of the *Spina Alba*; which is so obscure an Expression, that it has been almost impossible for any one to unty this Gordian Knot. *C. Bauhine*, and after him *Parkinson*, affirm it to be the Plant which, on their Authority, I have here mention'd; but *Casalpini* and *Anguillara* have refer'd it to the *Carduus tomentosus Adversariorum*.

SPINA CERVINA. See } RHAMNUS CATHARTICUS.  
SPINA INFECTORIA. See }

SPINA LUTEA. A Name for the *Scolymus*; *chrysanthemum*.

SPINA SOLSTITIALIS. A Name in *Boerhaave* for several Sorts of *Yacca*.

SPINA SOLUTIVA. See RHAMNUS CATHARTICUS.

SPINA TOMENTOSA. A Name for the *Carduus tomentosus*; *acanthi folio, angustiore*.

SPINA VENTOSA. The Name of a Disorder of the Bones. See Os.

SPINACHIA.

The Characters are;

The Root is annual; the Flowers apetalous, staminate, seated at the Wings of the Leaves, consisting of a quadrifid Calyx and Stamina, on a separate, or male Plant. The Ovary is a Capsule, either turbinate, horned, or angulated, furnished with hairy Tubes, and contains a turbinate Seed on the female Plant.

*Boerhaave* mentions four Sorts of *Spinachia*, which are;

1. *Spinachia*; vulgaris; capsulâ feminis aculeata. *Tourn. Infl. 533. Boerh. Ind. A. 2. 103. Spinachia. Offic. Ger. 260. Emac. 330. Rai Hist. 1. 162. Spinachia sive Olus Hispanicum. Park. Parad. 496. Spinachia femina. J. B. 2. 963. Lapathum hortense, seu Spinachia femine spinosa. C. B. P. 114. SPINACHE.*

*Spinache* has a long whitish Root, from which springs several pretty broad, sharp-pointed Leaves, hollowed in next the Stalk, and in Shape somewhat like Aron; but they are more wrinkled, and covered with an unctuous Measles. The Stalk is fat and succulent, growing to be about two Foot high, having the like but smaller Leaves growing on it, with several Spikes of green herbaceous Flowers, and after them come large prickly Seed. It is sown yearly in Gardens.

It is more used for Food than Medicine, being a good boiled Salad, and much eaten in the Spring, being useful to temper the Heat and Sharpness of the Humours. It is cooling and moistning, diuretic, and renders the Body soluble. *Milner's Bot. Off.*

*Spinache*, which is now so celebrated and useful a Green, seems unmention'd and unknown to the Antients. It is so called by the Moderns, from its spinous Seed, though there is, also, a Species of it which bears Seed which is smooth. We are not certain where it grows spontaneously, but it is probably of Spanish Original, since some call it *Olus Hispanicum*; but it refuses no Soil or Climate, and is in Use in almost all Parts of Europe. It is boiled without Water, for it affords Liquor enough in the Dressing to boil itself without the Help of any other.

Among all culinary Greens, says *Tragus*, *Spinache* is, in my Opinion, the most laudable and grateful, whence it may be eaten in almost all Kinds of Diseases. It is very serviceable in febrile Disorders, and is proper for old Persons who are subject to Costiveness: In the first, by allaying the Heat, though it be even of a hectic Quality; and for aged Persons, by lubricating the Belly, which is much better than by always stimulating it to Excretion by Cathartics and Suppositories. It is cooling and moistening, by its nitrous Quality, mollifies the Belly, cures Roughness of the *Aspera Arteria*, and is good for a dry Cough. It easily creates a Nausea, unless it be seasoned with Ginger or the like. The Juice and distill'd Water mitigate the Heat and gnawing Pain of the Stomach, and are said to procure Milk. Externally, it is apply'd by way of Cataplasm to the Stomach and Liver, in order to remove a Pain and Inflammation. *Rai Hist. Plant.*

2. *Spinachia vulgaris*; sterilis. *T. 533. Lapathum, hortense, seu Spinachia sterilis. C. B. P. 115.*

3. *Spinachia*; vulgaris; capsulâ feminis non aculeatâ. *T. 533. Lapathum, hortense, seu Spinachia femine non spinosa. C. B. P. 115.*

4. *Spinachia*; Cretica; supina; capsulâ feminis aculeatâ, *T. 533. Beta, Cretica, femine spinosa. J. B. 2. 963. Lapathum Creticum ejusdem. Ibid. Boerh. Ind. Alt. Plant.*

*Spinache* is mollifying, but not nourishing; for if one eat a Pound of it, he voids it all again by Stool, for the Juice goes all off in Concoction, and spends itself in loosening the Belly. The fresh Herb affords a thick, but very wholesome Juice, which mitigates the Asperity of the Lungs, and is of Service in Inflammations of the Intestines. *Hist. Plant. ascript. Boerhaave.*

SPINALIS MEDULLA. The Spinal Marrow. See CEREBRUM.

SPINALIS. Spinal; belonging to the Spine. This is an Epithet of certain Apophyses of the Vertebra of the Spine; and of several Muscles. Thus there are the

SPINALIS COLLI MINORES. See INTERSPINALES.

SPINALIS DORSI MAJOR.

This is a pretty long and slender Muscle, lying upon the lateral Part of the Extremities of the spinal Apophyses of the Back.

It is composed of several muscular Fasciculi of different Lengths, which crossing each other, are inserted laterally by small Tendons in the spinal Apophyses from the second, third, or fourth Vertebra of the Back, and sometimes, though seldom, from the last of the Neck or the first of the Back; all the Way to the first or second Vertebra of the Loins, with several irregular Decussations, which vary in different Subjects.

The longest Fasciculi are a little incurvated, because they inclose the rest, which are gradually disposed between the long ones and the spinal Apophyses, so that this Muscle, which terminates by both Extremities in Points, is of some considerable Breadth in the Middle.

It communicates by some Fibres with the *Longissimus Dorsi* and *Semi Spinalis* or *Transverso-Spinalis*; and it sends off Fasciculi to several transverse Apophyses of the Back, from the fourth to the eleventh.

It is commonly named *Semi-Spinalis*, but very improperly.

SPINALES DORSI MINORES.

These Muscles are of two Kinds; some go laterally from the Extremity of one spinal Apophysis to another, being often mixed with the short Fasciculi of the *Spinalis Major*: The rest lie directly between the Extremities of two neighbouring spinal Apophyses, being separated from their Fellows on the other Side by the spinal Ligament. They are smaller and thinner than those of the Neck, and are properly enough termed *Inter-spinales*.

All the *Spinales* and *Transversales* of the Back and Loins belonging to the Clavi of the *vertebrales Recti*, the *Spinales* to the middle Muscles, and the *Transversales* to the lateral, are principally useful to assist, moderate and maintain the Motions of Extension and lateral Inflection, whether simple and direct, or oblique and compound; much in the same Manner as is done by the like Muscles of the Neck.

The *Spinales Majores* and *Transversales Majores* have this peculiar to them, that their fleshy Portions not lying in a straight Line between their Insertions, they may perform not only direct Motions when they act in even Numbers, but, also, oblique Motions, when the Numbers of each Side are unequal. The small *Spinales* and *Transversales* being confined between two neighbouring Vertebrae, cannot co-operate but in direct Extensions and Inflections.

SPINALES ET TRANSVERSALES LUMBORUM.

There are some Fasciculi which run up from the superior false Spines of the *Os Sacrum* to the lower spinal Apophyses of the Loins, which may be looked upon as so many *Spinales Lumborum Majores*. There are likewise some *Spinales Minores* between the spinal Apophyses of the Loins, and *Transversales Minores* between the transverse Apophyses, which are sometimes of a considerable Breadth. *Winslow's Anatomy.*

SPINUS ALBUS. A Name for the *Mespilus*; *Apia folio*; *ylvestris*; *Spinosa*; *sive Oxycantha*.

SPINUS; or *Ligurinus* of *Fonten*, is a little Bird, of the Size of a Goldfinch, generally of a yellow and black Colour. Its Beak is of a moderate Length, slender, and pointed. It feeds upon Seeds, and is found in warm Countries. It builds its Nest in mountainous Woods, and sings very agreeably. It contains a large Quantity of volatile Salt, and, when eaten, is reckon'd good for the Epilepsy.

SPIPOLA. The Name of a small Bird, of which *Al-drovandus* reckons several Species.

SPIRACULA. The Pores of the Skin.



## SPIRÆA.

The Characters are ;

The Calyx is monophyllous, quinquefid, and stellated ; the Flowers rosaceous and pentapetalous ; the Petals growing out of the interior Margin of the Calyx, at the Interstices of the Segments ; the Stamina are very numerous. The Ovary in the Bottom of the Calyx becomes a Fruit composed of five Pods, each growing on its Placentula, and full of an oblong Seed.

*Boerhaave* mentions four Sorts of *Spiræa*, which are ;

1. *Spiræa* ; *Salicis folio*. *Tourn. Inst.* 618. *Boerb. Ind. A.* 2. 238. *Spiræa* ; *Offic. Raii Hist.* 2. 1699. *Spiræa Theophrasti forte Clusio*. *J. B.* 1. 559. *Park. Theat.* 1437. *Frutex spicatus foliis salignis serratis*. *C. B. P.* 475. SPIKED WILLOW.

It is cultivated in Gardens, flowers in *July*, and the Seed is ripe in *August*. The Part of Use in Medicine is the Seed, which is of an astringent Quality.

2. *Spiræa* ; *Opuli folio*. *T.* 618. *Anonymos, Ribesii foliis* *Icon. Roberti*. *Euonymus Virginiana, Ribesii folio capsulis eleganter bulatis*. *H. A.* 1. 169. See ANONYMOS RIBESII FOLIIS.

3. *Spiræa* ; *Hyperici folio, non crenato*. *T.* 618. *Prunus sylvestris affinis Canadensis*. *C. B. P. App.* 517. *Hypericum, frutescens, Canadense*. *Robin.*

4. *Spiræa* ; *Africana ; odorata ; foliis pilosis*. *Commel. Rar.* 3. *Boerb. Ind. Alt. Plant.*

**SPIRITUS.** Spirit. Any fine volatile Substances, which exhale from Bodies in a given Degree of Heat, are called Spirits : Hence, by a Sort of imaginary Analogy, upon a Supposition of their extreme Fineness and Volatility, the nervous Fluid has had the Name of *Spiritus*, Spirits appropriated to it. Upon the nicest Scrutiny, it appears, that the cortical Substance of the Brain is a Collection of extremely minute Glands, from whence distinct medullary Fibres arise, which by their Union form the *Medulla Oblongata* ; that a vast Quantity of pure, fine, arterial Blood is convey'd to the Brain ; that a large Quantity of a very thin Fluid is found in the medullary Part of the Brain when cut, which in Disorders of the Head, and nervous System, is often found to be more copious ; and that the Blood convey'd to the Head, is afterwards returned by the Veins to the Sinuses, thence to the Jugular Veins, and by these to the Heart. This Structure renders it highly probable, that the cortical Substance of the Brain consists of minute Glands, which secrete a very fine Fluid, to be convey'd by the medullary Fibres to the *Medulla Oblongata*, whence, and from the spinal Marrow (a Continuation thereof) all the Nerves of the Body arise.

It is, farther, remarkable, that all the Nerves consist of the same medullary Substance, inclos'd in a Coat borrow'd from the *Pia Mater*, and another from the *Dura Mater* ; that if the *Medulla* of the *Cerebrum*, or *Cerebellum*, is any Way injur'd by a Wound, Compressure, Putrefaction, or Corrosion, every Action of the Body depending upon the Nerves which arise from those Parts, immediately ceases, though the Nerve itself remains intire ; that the Nerves, notwithstanding their Laxity, Incurvation, and winding Progress, very readily convey Sense and Motion to all the Parts of the Body ; that if any of the Nerves are divided, or compress'd, all Sensation and Motion betwixt the Division or Ligature, and Part to which that Nerve is distributed, immediately ceases, though it remains in the Parts betwixt the Division or Ligature, and the Origin of the Nerve. Hence 'tis evident, that Sensation and Motion are convey'd to all the Parts by Means of the Nerves : And it is concluded, though not with an equal Degree of Certainty, that the Animal Spirits are the Instruments of Sensation and Motion.

This is all that is certainly known of these Spirits, which are distinguish'd into Natural, Vital, and Animal. The Natural are said to preside over the Digestion of the Aliment, and Elaboration of the Chyle, or the natural Actions : The Vital over the Motion of the Lungs, and Heart, or vital Actions : And the Animal, over the animal Actions, as Sensation, voluntary Motion, &c.

Upon so precarious an *Hypothesis*, as that of the real Existence of these Spirits, many elaborate Theories have been form'd, which have introduc'd a great deal of Error, Confusion, and bad Practice. Thus *Morton* speaks much about *something deleterious conceal'd in the animal Spirits*, which, according to his System, must be drove out by warm Cordials ; a Practice which has destroy'd more Lives than War, Pestilence, and Famine. And thus *Willis* amuses us with a *Phlogosis*, or Inflammation of the animal Spirits, with no great Degree of Information to his Readers.

*Dr. Cheyne*, a Gentleman who had Candour enough to own the Errors of his Profession, and Spirit enough to think for himself, thus treats of the animal Spirits.

The Doctrine of Spirits, to explain the animal Functions and their Diseases, has been so readily and universally received from the Day of the *Arabian Physicians* (and higher) down to our present Times, that scarce one (except here and there a Heretic of late) has called this Catholic Doctrine in question. And those, who perhaps had Courage or Curiosity enough to doubt of, or examine the Matter, either out of Laziness, or to avoid a tedious Way of expressing themselves, have implicitly gone into the common Dialect, which is now very convenient. The System first was but rude and imperfect, but having been adopted by Philosophers and Mathematicians, as well as Physicians, they have brought it to a more consistent and less absurd Theory. *Borelli* gave it a great Countenance, by receiving it to explain Muscular Motion, in his Book *de Motu Animalium*. *Willis* gave it all the Advantages of Eloquence and Metaphor. *John Bernoulli* has added to it a kind of Geometry and Calculation. And last of all, *Monsieur des Molières*, in the *Memoirs de l'Academie Royal* for 1724, has added Plainness, and some Conformity to the natural Appearances, and taken off most of the common Objections. I shall not tire myself nor the Reader, by detailing the System at length, nor the several Steps by which it has been reformed and amended. *Goelike*, Professor at *Frankfort*, in a small Treatise, has solidly exposed and ridiculed it, as far as *Borelli* went, or the precedent or co-temporary Physicians : And *Dr. Pemberton* has, I believe, geometrically shewn the Insufficiency of what *Bernoulli* has advanced to mend the Matter, in his Preface to Mr. *Cowper's* Book on the Muscles. I shall therefore only suggest some general Reflexions, which perhaps equally distress this System, however improved or amended.

I will not urge, that the best Eyes or Senses, however assisted, have not hitherto been able to discover any Cavity in the Substance of the Nerves, or in the small Filaments into which they are divided ; that, on the contrary, as far as *Leeuwenhoek*, doubtless the best Observer, or others who have examined the Matter with great Accuracy, could perceive, they appear solid, transparent, and with broken Reflexions, even when dry, like crack'd Glass, Wire, Horn, or any other solid Substance, without any apparent Cavity. Nor that by compressing them by Ligatures, stopping the Influx, or by stroking and milching their Lengths, are any Appearances to be observed like those in other Vessels, which we know carry Fluids in them, more than must necessarily happen from compressing the small Arteries that go along by them. It is true, that by stopping and tying the Trunks of the greater Nerves, the Muscle itself will turn paralytic and motionless, but it will equally do so, upon intercepting the Motion or Influx of the Blood, which concludes nothing but this, that these Nerves are necessary towards the Action of the Muscles, whether from their carrying a Fluid, or from their own tonic Nature, their internal Configuration, or any other Manner they may act, is not thereby determined. And if Probabilities could any Way influence a Fact, they must lie on the other Side of the Question, since that thin and lost Liquor, which seems only fit to keep them moist and lax, rather derogates from the Existence of any spirituous Fluid in them, proper for the intended End. Nor, thirdly, will I urge against it *Dr. Glisson's* Experiment, of putting the Arm of a strong, brawny Porter into a large Tube full of Water, and fixing it close to his Shoulder, that the Water might not get out, but ascend into a small conical Tube, passing out of the Side of the larger one ; whereby he found, that upon the strongest Action of the Muscles, the Water subsided and fell in the small Tube, and rose again upon their ceasing to act ; from whence he concludes, that muscular Motion is not performed by the Inflation or Swelling of the Muscles, but that, on the contrary, when they are moved, they are contracted into a lesser Figure, and more compact Substance, or are hardened ; which would scarcely happen, if any Matter, how subtle so ever, flowed in the Nerves, and thereby was added to the Substance of the Muscles : For since the Impenetrability of Matter is demonstrable, the least such an Addition could effect, was, that tho' the Fluid, by its Subtlety, would not sensibly increase the Bulk, yet surely it could not lessen it. I say, I shall not urge these obvious Objections against this Doctrine ; because, tho' I think they cannot be solidly answered, yet they may be evaded ; but shall proceed to offer a few Considerations, which I think equally distress it, in all the Improvements that have been made on it.

Some have imagined the Nature of this Fluid of animal Spirits, to have some Resemblance with that of Light, (the most subtle, active, and penetrating Fluid apparent in this our System) which would make them quickly penetrate, fly through, tear, break, and consume their rare and tender Prisons, which could be of no more Use to them, to determine them to regular and uniform Motions, than Glass Tubes are to Light. And were they like urinous or inflammable



flammable Spirits, yet neither would such slender Prisons contain them any Time, or convey them uniformly for regular Purposes. And lastly, if they were like Water or aqueous Fluids, they could neither have Activity nor Subtlety sufficient to solve the Appearances, nor could they move with Velocity enough to answer the Purposes of Volition, Sensation, and voluntary or involuntary Motions, under that more gross and sluggish Form, and would even then ouze through their containing Tubes.

In a Word, give them what Nature you will, they will never answer the animal Functions and Appearances. For suppose them to have any Resemblance to the other Fluids in our System, if extremely volatile and active, they would fly away, and tear, in a very short time, their containing Tubes, and Canals of the Nerves, and could not receive regular Determinations from them; and yet such they must be, to answer the Ends of Volition and Sensation: And if they were grosser, denser, and less refined, they would not answer quick and sudden Motion and its Cessation. And they can never be supposed to be extremely active and volatile, and gross and thick at the same Time. We find in Dropsies, that a grosser Fluid than they can be supposed to be, will ouze in great Quantities through Vessels of as close a Texture as theirs, not to mention the sudden Effects of all Kinds of Spirits (taken inwardly) upon the Nerves, which from this Appearance must even be supposed to penetrate the Substance of these Nerves, and yet the nervous Fluid must be, at least, as subtle and penetrating as they.

Quick and instantaneous, strong and violent Motions, (increased by adding great Weights, as we know by Experience) seem absolutely to have determined the Nature of animal Spirits, to that of the most active and volatile Kind of Fluids imaginable, because none else is capable of so quick and strong Actions, in order to determine the instantaneous Obedience of the Muscles to the Orders of the Will: And such strong, violent, and quick Motions, must necessarily make a great Waste and Expence of these animal Spirits, so as to require a constant Supply of such fine and subtle Parts from the Food: And yet we find, that aqueous, vegetable, and earthy Substances only, make up most of the Nourishment of those who have the best and strongest Spirits, and live in a constant Course of such Action; and the animal Heat employed to generate them, rises no higher than that of Vegetation or Incubation only, which is not sufficient for any other Kinds of Spirits, inflammatory or urinous. But how any Fluids at all, of what Kind soever, can be supposed or imagined to go backwards and forwards in the same indivisible Instant almost, (to convey Pain, for Example, to the sentient Principle, and muscular Action at the same Instant, to shut the Eyes upon Appearances of Danger, or to actuate all the Muscles necessary for running away under a Panic, and a thousand other Instances that may be given) seems very hard to explain from the known Nature of Fluids.

The Existence of animal Spirits has been principally contrived to solve the Appearances of nervous Distempers, as Obstructions of the Nerves, or their Incapacity to act under some Circumstances. Now, if these Appearances can be accounted for, more conformably to the Analogy of Nature, without this Supposition than by it, then the Dispute will be at an End, and they useless. As to the Obstructions of the Nerves, since they are plainly cylindrical (or nearly such) it does not seem agreeable to Mechanism, that any Fluid should readily be obstructed in them. For whatever Fluid, of whatever Nature, can enter the one Extremity in the Brain, will move on by the same Impulse to the other. For Example, a Ball of the same or less Diameter than the Cavity of a cylindrical Tube, will move on (by the Force first impressed) from one End to the other, without Stop or Hindrance from the Tube; and the same may be concluded of any Fluid; which makes Obstructions pretty unaccountable in cylindrical Tubes. Besides, it is no small Prejudice against any Fluids moving in the nervous Fibres, even that their Figure is cylindrical; for we see in all Tubes that contain Fluids (as the Veins, Arteries, and Lympheducts) to accelerate the Motion of the Fluid, their internal Figure is conical, or tapering or nearly so, which readily accounts for the Obstructions in these last mentioned Vessels; and it is not improbable that Nature, which is always similar or consistent with itself, had the Nerves been designed to carry a Fluid, would have hollowed them in this Form. And on the contrary, the frequent Obstructions that happen in those Vessels, which are of this mentioned conical Figure, and the Hardness of such Obstructions, may be sufficient to account for the Obstructions of the Nerves themselves. From all which we may, I think, pretty firmly conclude, that the Notion of animal Spirits is of the same Leaven with the substantial Forms of *Aristotle*, and the celestial System of *Ptolemy*:

Perhaps there may be in Nature material Systems of Fluids of several Degrees of Rarity and Subtlety, even indefinitely many and different. What makes it not impossible that there may be more such Systems of subtle elastic Fluids, than that mentioned *Æther* described by Sir *Isaac Newton*, is, that the Elasticity, Attraction, and other Qualities of this *Newtonian* *Æther*, must necessarily be caused by some other more æthereal and subtle Fluid, else we must admit Elasticity, Attraction and Activity in the Particles constituting this *Newtonian* *Æther* without a Cause; or we must suppose these Qualities innate to them, and to have been impressed on them immediately by the first and supreme Cause. And thus we are necessarily thrown into one or other of the two Horns of this Dilemma, either to admit of Fluids descending in *infinitum*, in Tenuity and Subtlety, to produce Elasticity and Attraction, or allow Particles of Matter impressed with these Qualities in their Creation immediately by the Supreme Being. It is true, this *Newtonian* *Æther* advances us one Step further into the Nature of Things; but here we must necessarily stop, the Works of God appearing literally inscrutable to Perfection. A few of the first Steps we may go in this infinite Progression, but in all the Works of God there is a *ne-plus-ultra*; perhaps it may be in the inanimate material System of Things, as it is most certainly in the Animal Kingdom, that Nature and its Author, to distinguish itself from finite Mechanism, always operates by Systems and Organs in Number even infinite, if not infinite in the highest Sense, yet certainly indefinite or infinite in a relative Sense, and in regard to a finite Capacity; and thus he leaves Images and Signatures of himself on all his Works, as is manifest in Quantity, Time, and Motion; and their Signs or Characters, infinite Divisibility, infinite Progressions, Eternity, Series's and Fluxions. Mercury is grosser or denser than Water, Water than Air, Air than Light, Light than *Æther*; and how far further Nature may go in descending in Tenuity, Subtlety, and refining of other Systems of Fluids, none alive can certainly tell. This as a Conjecture of the Analogy of Things, the infinite Divisibility, or Increase of Matter, from finite, till it becomes infinitely great or small, at least, as to our Conceptions, Nature's never passing from positive to negative Quantities, till it goes through the Medium of Nothing, or infinitely small of the same Denomination; its never passing from Motion to Rest, but through infinitely small Motion: In a Word, its never acting in generals, by Starts, Jumps, or unequal Steps; I say, all these Hints seem to point out something like this. From all which, and a great deal more might be urged, it may not be improbable, that as in Quantity there is one or more means between the least and the greatest; so in Substances of all kinds, there may be Intermediates between pure, immaterial Spirit and gross Matter, and that this intermediate, material Substance, may make the Cement between the human Soul and Body, and may be the Instrument or Medium of all its Actions and Functions, where material Organs are not manifest: And may possibly be the Cause of the other secret and inscrutable Mysteries of Nature, and the same (for ought I know) with Sir *Isaac Newton's* infinitely fine and elastic Fluid or Spirit; for since he has not, I believe none else will take upon him to determine its Specific Nature, or indeed, whether it actually be or not: The innumerable Appearances seem to imply some such Thing.

To conclude this dark Subject of Animal Spirits, if they must be supposed, we may affirm they cannot be of the Nature of any Fluid we have a Notion of, from what we see or know. Indeed, the large Size, the wonderful Texture, and the great Care and Security Nature has employed about the Brain, makes it probable it has been designed for the noblest Uses, that is, to be the Temple or Sensorium of the sentient and intelligent Principle. And its Resemblances, in many Circumstances, to the other Glands, which certainly separate Liquors, makes it not impossible that it may have Uses analogous to these. But how to assign them, explain, or accord them with what has been suggested above, I know not. May not the sentient Principle have its Seat in some Place in the Brain, where the Nerves terminate, like the Musician shut up in his Organ Room? May not the infinite Windings, Convolutions, and Complications of the Beginning of the Nerves which constitute the Brain, serve to determine their particular Tone, Tension, and consequently the intestine Vibrations of their Parts? May they not have interwoven Blood-Vessels and Glands to separate a milky Liquor; to soften, moisten, and continue their Elasticity, and innate mechanic Powers through the whole nervous Systems? And, also, to keep them in a proper Condition to play off the Vibrations, Tremors and Undulations made on them by Bodies, or their Effluvia? May not these Vibrations be propagated through their Lengths, by a subtle, spirituous, and



infinitely elastic Fluid, which is the Medium of the intelligent Principle? As Sound is conveyed through Air to the Tympanum, and by it to this Medium or Æther, and from the Medium to the intelligent Principle, and as Sight is performed through or by Light; and is not the Analogy of Nature and Things thus in some measure preserved? I own it is much easier to confute than establish; and I should not be very sanguine about the Non-Existence of Animal Spirits, but that I have observed the Dwelling so much upon them has led Physicians too much to neglect the mending the Juices, the opening Obstructions, and the strengthening the Solids, wherein only the proper and solid Cure of nervous Distempers consists; and apply to Volatiles, Fetids, and Stimulants; which, at best, are but a Reprieve, and is not unlike blowing up the Fire, but at the same time forcing it to spend faster, and go out sooner; for Volatiles, Aromatics, and Cordials, are much of one and the same Nature, and all but Whips, Spurs, and pointed Instruments to drive on the resty and unwilling Jade. *Cheyne's English Malady.*

Upon the whole, it should seem, that whoever lays any Stress upon the precarious Doctrine of Animal Spirits, in accounting for Distempers, or investigating Remedies, is either weak enough to be imposed upon himself, or malicious enough to amuse others.

**SPIRITUS RECTOR.** The prevailing, or ruling Spirit of Vegetables. This resides in the Oil of Plants, and is extremely volatile, being inimitable by Art, and imparting that Smell and Taste to every individual Plant, which is peculiar to it, and to be found in no other.

In Pharmacy, there are many Liquors which go by the Name of Spirits, the principal of which are the following.

**SPIRITUS ACETI.** Spirit of Vinegar. See **ACETUM.**  
**SPIRITUS ALKERMES.**

Take Spirit of Cinnamon, Citrons, black Cherries, and Rosemary, of each four Ounces; Juice of Chermes, two Ounces; Sugar, two Ounces. Mix all well together, and let them stand to settle a proper Time; decant off clear by Inclination, and filter the Remainder. To the whole add ten Leaves of beaten Gold, broke small, and keep for Use.

This is a mighty grateful Cordial, and by the Virtues of its respective Ingredients, cannot but be good in all Intentions where the Spirits are to be raised, and the Nerves strengthened; and from the Chermes it is supposed to be particularly useful in assisting Delivery. It may be taken at Discretion.

#### **SPIRITUS ANTI-EPILEPTICUS PUERORUM.**

*An anti-epileptic Spirit for Children.*

Take Flowers of Lavender, Rosemary, Marjoram, Sage, of each two Handfuls; Castor, two Ounces; Camphire, three Ounces; Spirit of Wine, three Pints; Sal Ammoniac, four Ounces; Salt of Tartar, three Ounces; and simple Lavender Water, enough to cover the Ingredients. Then, after a Digestion of three or four Days, draw off one Pound and a half or two Pounds by a Retort, in which drop Oil of Rue, thirty Drops; Amber, twenty Drops; Oil of Mace and Juniper, of each forty Drops, and they will perfectly dissolve in it.

This is taken out of the *Collectanea Chymica Lydensia*, where it stands prodigiously recommended for all spasmodic Affections, and whatsoever appears with Convulsions of the Nerves, and particularly in those of Children. The Ingredients sufficiently demonstrate its Properties that way, and it is very convenient for taking; tho' if the chymical Oils were omitted it would be better, and not much the worse in Efficacy: For the other Ingredients pretty well fate it, inasmuch as to turn an aqueous Vehicle it is dropt into milky. It may be given from two to twenty Drops in any proper Liquor, and repeated according to the Urgency of the Symptoms.

#### **SPIRITUS AURANTIORUM.**

*Spirit of Oranges.*

Take Orange-Peels, fresh and clear'd from the White, one Pound; Proof Spirit, two Gallons. Draw off, in an Alembic, one Gallon and a half, and dulcify it with fine Loaf-Sugar at Pleasure.

This makes an excellent pleasant Dram, and can hardly be exceeded by any Thing, if a few fresh Orange Flowers be

strew'd upon its Surface afterwards. The last Running makes a good Carminative; and if no such Use takes it off in the Shop before, it will be worth keeping to throw into the Still at the next making of the Spirit. After the same manner are to be made the Spirit of Citrons, Lemons, or any Thing of the like Kind; and their Flavour will be greatly heightened with the least Touch imaginable of Ambergrease.

**SPIRITUS BENZOINI.** See **BENZOINUM.**

**SPIRITUS CASTOREI.** See **CASTOR.**

#### **SPIRITUS CERASORUM NIGRORUM.**

*Spirit of black Cherries.*

Take any Quantity of the Cherries, and bruise them, so as to break all the Stones and Kernels; then let them stand till they ferment, and draw off what is spirituous by an Alembic.

The Dose is from two Drams to one Ounce.

#### **SPIRITUS COCHLEARIE.**

*Spirit of Scurvy-Grass.*

Take of Garden Scurvy-Grass in Flower (or fresh and newly gathered at any other Time) twenty Pounds, bruise it grossly, and put it into a Copper-Still tinned within; put to it of the Grounds of Ale, three Gallons, with one Pint of new Yeast; stir them well together; lute on the Head, and kindle a little Small-Coal under it, to give just a fermenting Warmth; let it stand twenty-four Hours, and then give Fire to distil the Spirit. That which comes first is the best, and must be kept by itself; the other Running will serve for more Grass, in the Room of common Water, another Time.

The great Quickness and Volatility of the Herb seems so little to want any of this Help, that it is to be feared it is the worse for it; for let the Head be ever so close luted, some will make its Escape. Therefore we take the following to be much the better Way.

Take the same Quantity of Scurvy-Grass, and put to it of common Proof Brandy, two Gallons; a gentle Fire will bring over the Spirit, which may be drawn to near the Quantity of Spirit of Wine put in.

This will be strongly impregnated with the volatile Parts of the Grass, and keep much longer than the other; the Pungency of the Grass being naturally kept alive, as it were, in this Spirit, which of itself would either find an Escape, or die and flatten, as it will do in Time, with all the Contrivances that can be invented to prevent it. If two or three Pound of Horse-Radish be added to it, it will be much the better. This is given in all scorbutic Cases in common Liquors, from twenty to one hundred Drops; and possesses the principal Virtues of the Herb itself in Substance.

#### **SPIRITUS COCHLEARIE AUREUS.**

*Golden Spirit of Scurvy-Grass.*

Take of the foregoing Spirit, one Pound; and dissolve in it of Resin of Jalap, or Scammony, or Gamboge, one Ounce. If there be any Sediment, decant the tinged Spirit off carefully from it.

This is kept up in great Esteem amongst the common People, by the great Pretensions of several Venders of it; but it is an indifferent and useless Medicine, unless to athletic Constitutions, and is very unfit to answer the Expectations its Name raises. Its Dose is from twenty to sixty Drops.

**SPIRITUS CORNU CERVI.** See **ALCALI** and **CERVUS.**

**SPIRITUS CROCI.** See **CROCUS.**

#### **SPIRITUS JUNIPERI.**

*Spirit of Juniper.*

This is made as that of the Oranges; two Pounds being allowed to one Gallon of Spirit of Wine. The poor and common People have it in a great Esteem, but theirs is made with the worst of Spirits, inasmuch that it passes by the Name of the Beggar's Cordial, and is most commonly called Gin.



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## SPIRITUS LAVENDULÆ.

### *Spirit of Lavender.*

The Manner of making this, from the College Dispensatory, is already described under the Article LAVENDULA, which see. But *Boerhaave* orders it to be prepared in the following manner.

Take six Ounces of fresh and ripe Lavender-Flowers, gathered in a warm clear Afternoon, and twelve Pounds of common Spirit of Wine, and distilled by the Rules of the Art, in the Alembic and Worm, till the Liquor begins to come over milky. What arises first, is a limpid Spirit impregnated with the Taste and Odour of the Plant, and must be kept separate. A thick white Liquor will now begin to follow; a Pint whereof is to be collected and kept apart, there will remain behind a brownish black Liquor, together with the Flowers, but not much of the manifest Virtue thereof. The first Liquor is called the Spirit, and the second the Water of Lavender.

Take three Ounces of the like Flowers, and pour the former Spirit and Water upon them, and distil as before. Keep the pure limpid Spirit separate, under the Title of the double Spirit of Lavender, but draw off none of the white Water, for fear of Burning. A Quart of fresh Water may, however, be poured into the Still, and then a Pint drawn over, which will serve in other the like Distillations. In the same manner, two Ounces of recent Flowers may be distilled with the preceding double Spirit, and the Water be afterwards obtained; by which means the Spirit will be so much the richer in the native Spirit of the Lavender. Water is here added, least the Flowers, added after the first Distillation, should become dry, and burn, whilst the last Spirit was running off, and by repeating the Distillation with fresh Flowers every time, the Spirit thus becomes excellent. The same Operation may be performed, tho' slower, in a Glass-Body or Retort, with little Trouble, and without Foulness. And thus I have often carried these Spirits to the highest Perfection. And this Operation is universal for obtaining all the Spirits from odoriferous, aromatical Flowers; the principal whereof are Garden-Cloves, Saffron, Jasmijn, Lavender, Lilies, Marum, Orange-Flowers, and Rosemary Flowers, but a principal Spirit of this Kind is that of Rosemary every where celebrated, and too much used under the Name of *Hungary Water*.

### R E M A R K S.

It is easy to perceive that the essential Oil of the Flowers is here raised in the Distillation; and along with this Oil the Spirit of Wine rises almost pure, like Alcohol; and therefore this Spirit dissolves the Spirit of Lavender, and the Oil that rises with it: But after the Alcohol is drawn off, and the Water begins to follow, then the ascending Oil turns the Water milky. Whence is easily understood how these Spirits are procured by Art, and exalted at the Pleasure of the Artist.

## SPIRITUS MELLIIS.

### *Spirit of Honey.*

Mix one Pound of Honey with three Pounds of clean Sand, and put it into a Retort in a Sand-Furnace; make a Fire of the first Degree for two Hours; increase it to the second for two Hours more, and so go on to the third; where let it remain till no more Fumes nor Drops will fall: There will then come over an empyreumatical Spirit and Oil: Put them both into a Cucurbit, and with a Fire of the first Degree draw off the insipid Water, and the second will raise the Spirit.

This is a Spirit only in the same Sense that other Acids are; for this is an Acid, and will dissolve Coral or Pearl, as distilled Vinegar. It is affirmed to be good to make the Hair grow, and used so much for that Purpose, by rubbing any bald Place with it, that it is to be met with almost in every Shop, altho' it is of no Value for any one thing else.

## SPIRITUS, SAL VOLATILE, ET OLEUM MILLEPEDUM.

### *Spirit, Volatile Salt, and Oil of Hog-Lice.*

Put any Quantity of Millepedes into a long-bodied Retort, so that it be not above half full; place it in a

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Sand-Furnace, lute on its Receiver, and give it the first Degree of Fire till the Retort is thoroughly hot; then increase the Fire to the second, in which keep it two or three Hours, according to the Quantity of Millepedes made use of, and some Liquor will drop into the Receiver, and the volatile Salt will begin to rise; increase it to the third and fourth Degree, then cease and take off the Receiver, when it is cool, where there will be a Spirit, and Oil, and a Salt, which must be separated and rectified apart, or put altogether into a long-neck'd Matrafs, luting on a Head and Receiver, and separate the Salt by Sublimation, as that of Vipers.

The volatile Salt is the only Part this Process produces that is of Value; and this has the Virtues of the Millepedes in Substance, and is good for all the Purposes of the *Vinum Millepedum*. Its Dose is from four to sixteen Grains in a Bolus, which is the best Form for its Administration.

SPIRITUS NITRI. See NITRUM.

SPIRITUS NITRI BEZOARTICUS. See BEZOARTICUM MINERALE.

SPIRITUS NITRI DULCIS. See NITRUM.

SPIRITUS NITRI CUM OLEO VITRIOLI. See NITRUM.

## SPIRITUS SACCHARI.

### *Spirit of Sugar.*

To one Pound of powder'd Sugar put three Pounds of Fullers-Earth also in Powder, or in its Room so much Sand clean washed; place a Receiver half full of the Mixture in a Sand-Furnace, and give it Fire of the first Degree for two Hours; then increase it to the second for two Hours more; proceed to the third, where keep it till no Fumes appear in the Receiver. Then let all cool, and in the Receiver there will be found a fetid Oil and Spirit, which separate as usual. Put the Spirit into a Retort or Cucurbit; set to it a Receiver unluted; make Fire of the first Degree, and there keep it till the Drops have a little Acidity; put away the Phlegm, lute on the Receiver, increase the Fire to the second Degree, where keep it till all is come off.

This will dissolve Pearl or Coral, and is also accounted a good Medicine in the Stone and Gravel in the Bladder or Kidneys; but it is hardly made or prescribed. The Dose is from ten to fifty Drops. There is another Spirit of Sugar, which the Chymists call Compound, that has half as much Sal Ammoniac as Sugar. It makes a finer and still more aperient Spirit, but is not used.

## SPIRITUS SACCHARI ARDENS.

### *A burning Spirit of Sugar.*

Take of coarse Sugar or Molasses, any Quantity at pleasure, in proportion to the Still; put to it ten or twelve times its Weight of Water; and let them stand a sufficient time to ferment: As soon as the Fermentation is over, put the Liquor into a Copper-Still with its Refrigeratory, and give it gradual Fire till it begins to drop. Observe so to manage the Fire, that the Spirit come from the Mouth of the Worm in a small Thread, and so continue till it runs insipid; then let out the Fire, and rectify the Spirit by a second Distillation, either in a Glass Body or Head; or if the Quantity be great, in a Copper-Vessel, observing to separate the Spirit from the Phlegm, as in the first Distillation, which may be further rectified till it will burn all away, and then it is called Alcohol.

This is of the same Use as the Spirit of Wine, and is much preferable to our Malt Spirits, both for Softness and Flavour, and is exceeded by none but that of the Grape.

SPIRITUS SALIS. See SAL.

SPIRITUS SALIS AMMONIACI. See AMMONIACUM.

SPIRITUS SALIS AMMONIACI SUCCINATUS. See AMMONIACUM.

SPIRITUS SALIS DULCIS. See SAL.

## SPIRITUS SALIS MARTIS.

### *Spirit of the Salt of Iron.*

Put into a Retort of Stone, or of Glass, covered with Clay, eight Ounces of the Salt of Iron, made with Oil of Vitriol, and Spirit of Wine; place the same in a Reverberatory,



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verberatory, cover the Junctures exactly with Clay, and make a small Fire of the first Degree, in order to heat the Vessel gently: Augment the Fire to the second Degree; when nothing more comes over, augment the Fire to the third Degree; and white Vapours will arise, so as to fill the Receiver: Continue this Fire till these Vapours clear up; then augment it to the fourth Degree, and continue the same till nothing more comes out from the Retort. The Operation ordinarily lasts twelve Hours. Let the Vessels cool, and take the Clay from them, and there will come out of the Receiver a very strong Smell of Sulphur; and one shall find there five Ounces and five Drams of a clear Spirit, having an acid Taste almost like the ordinary Spirit of Vitriol, but more stiptic, and participating much of the Spirit of Steel. Keep it in a Glass Bottle well stoppt.

The Author of it says, the Iron will not rise so well with a Mixture of Spirit of Wine in its Preparation; but it is the Degree of Fire to which such Rise is rather to be attributed. It may be given from four Drops to twelve in any convenient Liquor.

SPIRITUS SALIS CUM OLEO VITRIOLI. See SAL.

SPIRITUS SALIS VOLATILIS OLEOSUS. See AMMONIACUM.

### SPIRITUS SAMBUCI.

*Spirit of Elder.*

Ferment any Quantity of the Berries, and draw off the Spirit by an Alembic.

After the same manner is to be obtained the Spirit of any Fruit or vegetable Substance. The last Spirit is commended for possessing the Virtues of the Elder in internal Uses, and is applied outwardly as the *Spiritus Ceraforum Nigrorum*. The Dose is one, two, or more Spoonfuls.

### SPIRITUS SAPONIS.

*Spirit of Soap.*

Cut into small Pieces sixteen Ounces of *Alicant* Soap, and soften it in an Earthen Vessel by a gentle Fire, and mix in it seven or eight Ounces of Clay-Powder: Put the Mixture in a Retort big enough that one third Part may remain empty; place the same in a Furnace of Reverberation, adopt a Recipient, lute the Joints exactly, and make a little Fire in the Furnace to the third Degree; and continue doing so till nothing more distills. Separate the Vessels when cooled, and pour the whole contained in the Recipient into a Funnel furnished with grey Paper, and there will come out a watery and clear Liquor, which is yellowish and of a bitter Taste; which may be called the Spirit of Soap, of which there will be six Ounces.

I do not know that this has been made in our Shops, but it seems naturally suited for so many Purposes of Moment, as to deserve Recommendation; for it cannot but be very opening and resolute, both inwardly and outwardly applied; and seems admirably calculated for Embrocations, with other suitable Ingredients, against arthritic and such like obstinate Pains. I cannot, also, but think it efficacious in the Jaundice, Scrophulas, and the like glandulous Poulnesses; as also, a good Menstruum for Opium, to make a liquid Laudanum with.

### SPIRITUS TARTARI.

*Spirit of Tartar.*

Take of the pure Crystals of Tartar four Pounds; distil in a Retort with a large Receiver, increasing the Fire by Degrees till the Fumes altogether disappear. There will come out a Phlegm, a Spirit, and an Oil: After the last of these is separated, put the other into a Glass Cucurbit, and rectify in a Sand-Heat two or three times over, drawing off every time not above a third Part. Of the Remainder may be made a Salt of Tartar by Calcination; from whence, also, may be obtained an Oil of Tartar by Fusion.

The Spirit is extremely aperitive; but to make it yet more so, to three Parts of the Oil and Spirit which were procured by Distillation, put one Part of *Spiritus Nitri Dulcis*; shake them well in the Receiver, and put them carefully into a clean Glass Retort, which set in a Sand Furnace; fit and lute on a Receiver, and give it a Fire of the first Degree, till the Lute

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be dry; then advance to the second, in which will come over a penetrating and grateful Spirit, which is a most powerful Diaphoretic, and also assists by Urine. It is given from two Scruples to two Drams, in any proper Vehicle, in the most obstinate chronic Diseases.

### AQUA SEU SPIRITUS THERIACALIS CAMPHORATUS, CROLLII.

Take of Theriaca Andromachi, five Ounces; choice Myrrh, two Ounces and a half; Oriental Saffron, half an Ounce; Camphire, two Drams: Mix them, and pour thereto ten Ounces of rectify'd Spirit of Wine. Put them in a Cucurbit, and place thereon an Alembic will closed, and let them stand in a warm Place for four and twenty Days; after which distil them in *Balneo Mariæ*, by which means you will obtain a fine Spirit, which you must pour again upon the Dregs; digest them in the Cucurbit, and distil them over again, and repeat it the third Time.

#### R E M A R K S.

The Myrrh must be grossly pulverized, and put together with the Saffron into a Glass Cucurbit, the Camphire and Theriaca must be dissolved in Spirit of Wine, and this Solution poured into a Cucurbit, which must be carefully cover'd, and set in a warm Place, where the Matter must be suffered to digest for twenty four Days; after which you must adapt a Head and Receiver to the Cucurbit, exactly luting the Junctures, and distil off the Liquor in *Balneo Mariæ*. You are to pour back the distilled Spirit on the Dregs in the Cucurbit; and after a Digestion of four and twenty Hours, distil as before; and the same Distillation, or Cohobation, must be repeated the third Time, and the distilled Water or Spirit reserved in a Bottle well stoppt.

It provokes Sweat, and represses Vapours; resists Poison, and the Malignity of Humours, and is of Service in pestilential Seasons. The Dose is from one to two Drams.

The Author directs a long Digestion of the Ingredients, and several Cohobations, the better to exalt and separate all the volatile Parts in the Distillation. But it is to be feared, that in those repeated Cohobations the most subtle of these Particles will be dissipated, either through the Pores of the Glass, or through the Junctures, let them be never so well luted. I should rather think, therefore, that one Distillation was enough, after a Digestion of four and twenty Days, so long a Time being sufficient to render it easy for the Dissolvent to dissolve, and exalt all the Ingredients which enter that Composition, and so much the more as those Principles are almost wholly sulphureous and volatile. *Lenery Pharmacopée universelle*.

*Heister* in many Places bestows great Encomiums on the *Spiritus Vini Theriacalis*, (by which, I presume, he means the Medicine here described) and speaks of it as an external Remedy of great Efficacy in Gangrenes, Whitlows, and several other Chirurgical Cases.

### SPIRITUS VENERIS.

*Spirit of Copper.*

This is an acid Liquor drawn from the Crystals of Copper by Distillation, and may be prepared in the following manner.

Fill two Thirds of a Glass Retort with Crystals of Copper, prepared with distilled Vinegar. Put your Retort in Sand, adapt a large Receiver, and lute the Junctures. Use at first a gentle Fire, in order to raise by Distillation a small Quantity of insipid Water. This Water will be followed by a volatile Spirit. Then augment the Fire by Degrees, and the Head of the Retort will be filled with white Clouds. Towards the End of the Process surround the Retort with Live-Coals, in order to make the last Spirit, which is the strongest, come over. When the Clouds disappear, and the Receiver is cold, suffer the Fire to go out, unlute the Junctures, and pour all that is contained in the Receiver into a Glass Alembic, in order to distil it to Dryness with a Sand Heat; and this will be the rectified Spirit of Copper.

This Medicine is used against Apoplexies, Palsies, Epilepsies, and other Disorders of the Brain. Seven or eight Drops of it are to be taken in any proper Liquor. It dissolves Pearls, Corals, and other Substances of a like Nature.

There remains in the Bottom of the Retort a black Matter, which may be again converted into Copper, by fusing it in a Crucible, with the Addition of a little Saltetre and Tartar. *Lenery Cours de Chimie*.

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SPIRITUS VINI. See ALCOHOL.  
SPIRITUS VINI CAMPHORATUS. See CAMPHORA.  
SPIRITUS VINI RECTIFICATUS. See ALCOHOL.

## SPIRITUS VINI TARTARIZATUS.

*Tartarized Spirit of Wine.*

Take Salt of Tartar, two or three times coagulated and dissolved, one Pound; give it a strong Fusion in a Crucible, for two Hours; powder it in a warm Mortar, and whilst warm put it into a Matraſs to four Pints of rectified Spirit of Wine: Shake them well together, and place them in a Sand-Furnace; lute the Juncſures of the Head and Receiver; give Fire to ſuch a Degree, as may make the Drops ſucceed each other very quickly, and continue it till all the Spirit is come over.

This Spirit volatilizes and carries over ſome Part of the Salt of Tartar along with it; which is demonſtrable by the Salt ſuſtaining the Loſs of, at leaſt, one Ounce of its Weight. And by this Operation the Spirit of Wine obtains a more agreeable Scent and Taſte than before, and is, alſo, more ſubtile and penetrating.

Another Way.

Take the Salt of Tartar left in the Bottom of the Matraſs in the foregoing Operation, diſſolve it in pure rectified diſtilled Vinegar; filter the Diſſolution, and coagulate the Salt, which diſſolve again in more diſtilled Vinegar; filter and coagulate as before. Repeat this Operation ſo often, that no black Fæces remain, and that the diſtilled Vinegar comes off as ſtrong as it was put upon the Salt. And then is the Salt prepared, which ſome call volatile Salt of Tartar.

If a farther Exaltation of this Salt is required, take of the foregoing Salt of Tartar four Ounces, and put to it of the Spirit of Wine one Pound, which will readily diſſolve it. Let the Diſſolution ſtand quiet for three or four Hours, and decant it gently from the Fæces; draw off the Spirit of Wine in a gentle Sand-Heat in a Retort: Diſſolve the Salt again in the ſame Spirit of Wine, and repeat the Operation till no Fæces remain: Return the Salt again into the Spirit of Wine, in which it will totally diſſolve.

This is the true tartarized Spirit of Wine, with which Mr. George Wilſon ſays he uſed to extract the Tincture and anodyne Sulphurs of Metals, and unite them with vegetable fixed, and animal volatile Alcalies; and he farther owns it to be the principal Ingredient in the anti-rheumatic Tincture (of which he does not give the Recipe) that cured him of a violent Rheumatism, which afflicted him three Years ſucceſſively; and that he was not only freed from thoſe acute Pains which attend the Diſtemper, but then continued without any Return, which was about fifteen Years after. Nor are its Virtues (he continues to inform us) confined to that Diſeaſe only; for the Gout, Scurvy, Dropſy, Jaundice, Colic, Green-Sickneſs, and Stone in the Bladder or Kidneys, give way to it. Its Doſe (that is of this Spirit) is from fifty Drops to two Drams, diluted in Wine and Water, or both mixed.

SPIRITUS VITRIOLI. See VITRIOLUM.

SPIRITUS VITRIOLI DULCIS. See VITRIOLUM.

SPISSAMENTUM. The ſame as STYMMMA; which ſee.

SPITHAMA. σπιθαμή. A Meaſure of Length, called a Span, which is uſually ſaid to be twelve Fingers Breadth, or as much as from the End of the Thumb to the End of the little Finger, when extended.

SPLANCHNICA. σπλάνχνα, from σπλάγχνον. An Entrail or Bowel. Medicines appropriated to the Diſeaſes of the Bowels or *Piſcera*.

SPLEN. The Spleen. See LIEN.

SPLENECTOMIA. An Excision of the Spleen.

SPLENETICA. Remedies for Diſorders of the Spleen.

SPLÉNIA. Compreſſes.

In dreſſing Wounds, after the Plaiſter and other Neceſſaries, it is uſual to apply Compreſſes, which are made of clean ſoft old Linen, four, ſix, or eight times doubled. They were called *Splénia* by the ancient Phyſicians, becauſe of the frequent Reſemblance of their Figure to that of the Spleen; and they are called Compreſſes, becauſe they ſerve to keep the Plaiſter and other Dreſſings firm. Compreſſes are alſo often applied without Plaiſters, ſometimes dry and ſometimes moiſten'd with Waters, Spirits, &c. of different Kinds and Qualities, according to the Nature of the Diſorder.

The Figure and Size of Compreſſes are different, according to the different Parts of the Body to which they are applied. Sometimes they are ſquare, as in Tab. 23. N<sup>o</sup>. 12. oblong, as in N<sup>o</sup>. 13. triangular, as in N<sup>o</sup>. 14. crucial, as in N<sup>o</sup>. 15. According to their Situation, alſo, they are called right,

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oblique, and tranſverſe, and ſometimes angular, when they ſurround the Arm or Leg. Some are ſhaped like an Aſterisk or Star, as in N<sup>o</sup>. 16. Some are cut either on one Side or both Sides, as far as the Middle, ſee N<sup>o</sup>. 17, 18. Some are hexagonal, like N<sup>o</sup>. 19. and others are globular, like a Ball, which are placed under the Arm-pits, in Luxations of the Shoulder-bone, ſee N<sup>o</sup>. 20. Some are ſmall and ſquare, like N<sup>o</sup>. 21. which are uſed in ſtopping Hæmorrhages from wounded Blood-veſſels; others are ſlender, as N<sup>o</sup>. 22. and are uſeful in Sutures of Wounds and Ligatures of the Arteries. Thoſe which are deſigned for covering Plaiſters, ought to be made broader than the Plaiſters.

The principal Intentions of Compreſſes are, 1. To cheriſh the natural Heat of the Part affected, and keep out the Cold. 2. To ſecure the Dreſſings under them. 3. To convey liquid Remedies to the Parts wounded, or otherwiſe diſordered, and to contain them longer on the Part. 4. To fill up any Inequalities or Depreſſions about the wounded Part, that the Dreſſings may be kept firm, eſpecially in Fractures. 5. To prevent the Skin from being irritated by the Stricture of Bandages, which might occaſion troubleſome Itchings, and even Pain. *Heiſter's Surgery*.

SPLENICA. Medicines appropriated to Diſorders of the Spleen.

SPLENISCOS. σπληνισκος. A Compreſs.

SPLENITIS. σπληνίτις. An Inflammation, or Tumor of the Spleen. *Splenitis* is, alſo, a Name for a Vein in the Left-Hand, the ſame as the *Salvatella*, which in the Right-Hand is called *Jecoraria*.

SPLENIUM. The ſame as the *Aſplenium*, or *Ceterach*.

SPLENIUS MUSCULUS. See MASTOIDÆUS SUPERIOR.

SPLIT. A Name for the *Fumaria lutea*.

SPODIACON. σποδιακόν, from σποδός, Aſhes. The Name of a *Collyrium*, deſcribed by *Paulus Ægineta*, and thus called, becauſe it was of an Aſh Colour.

SPODITES. σποδίτης. An Epithet for Bread, importing its having been baked under the Embers. *Galen. Exages*.

SPODIUM. See CADMIA.

SPODOS. σποδός. The ſame as Spodium. Properly it ſignifies Aſhes.

SPOLIATORIUM. The ſame as APODYTERIUM.

SPONDYLIIUM. See SPHONDYLIIUM.

SPONDYLOS. σπόνδυλος. The ſecond *Vertebra* of the Neck, or a *Vertebra* in general.

SPONDYLOLITHOS. A Sort of Stone found in the Country of *Tirol*, reſembling the *Vertebra* of a ſmall Animal.

SPONGIA.

The Characters are;

It is a thin, bibulous, and ſtrangely implicated Subſtance, generally ſofter than the *Keratophytus*.

*Boerhaave* mentions ſeventeen Sorts of *Spongia*; which are;

1. *Spongia*; ad uſum præſtantiffima; foraminibus exiguis pervia. *T. 575*.

2. *Spongia*; compreſſa, magna. *C. B. P. 368*.

3. *Spongia*; globoſa. *C. B. P. 368. Imp. 635. Tourn. Inſt. 575. J. B. 3. 816. Raii Hiſt. 1. 80. Boerb. Ind. A. 8. Spongia marina alba. Ger. 1383. Emac. 1577. Spongia marina uſualis, Park. 1303.* SPUNGE.

The Sponge is an imperfect Plant, or Sea Vegetable growing under Water at the Bottom of the Sea, upon the Rocks and Stones, of a kind of woolly or hairy Subſtance, of a ſpringy Nature, full of a great Number of ſmall Cavities, light and porous.

Sponges uncalcined, are never uſed inwardly, being accounted of a poiſonous Nature, ſwelling up the Stomach, and not digeſting; they are uſed by Surgeons in Embrocations, and to ſtop Bleeding. *Miller's Bot. Off*.

Of *Sponges*, thoſe which are full of fine Perforations, ſome call *male* Sponges, and of theſe the hardeſt *Tragi*; thoſe which are of a contrary Diſpoſition to the before-mentioned, they call *female* Sponges; they are burnt like the *Alcyonium*.

Sponges, while new and not pinguious, are vulnerary, and repreſs Tumors; applied with Water or Poſca, they conglutinate recent Wounds, and with boil'd Honey heal old Sinuſes. Old Sponges have no ſuch Effect, tho' they ſerve to ſeparate and widen the Lips of Ulcers and Calluſes when ready to cloſe, by being tied up dry in a Linen Rag, and intruded after the Manner of Lint. New Sponges applied, dry rheumatic and cancerous old Ulcers, and repreſs Hæmorrhages. Burnt with Vinegar they are ſerviceable in a dry Lippitude, and where Abſtergents or Aſtringents are required; but for Ophthalmic Remedies they do beſt waſhed. Burnt with Pitch, they are good for an Hæmorrhage. Thoſe which are ſoſieſt are whitened in the hot Seaſon by irrigating them with the Spume of the Salt, which ſticks to the Rocks, and then expoſing them



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them in the Sun, in doing which we must be careful to turn the hollow Part upwards, and that by which they were cut off downwards. If the Weather be fair, they may be exposed by Moon-light, being irrigated with the Spume of Salt, or with Sea-water; and Spunges so exposed become whitest of all. *Dioscorides, Lib. 5. Cap. 138.*

A burnt Sponge is of an acrimonious and digestive Faculty. Impregnated with Bitumen, and used while it is on Fire in order to be dried, it stops an Hæmorrhage from a Wound. If Bitumen be wanting, Pitch may serve. A new Sponge is manifestly drying, for if you apply it to a Wound either with Water, Posca, or Wine, it will prove as good an Agglutinant as those Medicines which are applied for stopping an Hæmorrhage. *Oribas. de Virt. Simpl. Lib. 2. Cap. 1.*

The Use of a Sponge is in detarging Sordes, Sanies, Blood, Pus, or Medicines themselves from the Body, or in relieving the same under a biting or itching Sensation. But for the Face we use a Sponge in order to revive and raise the Spirits when sunk, as in a Lipothymy, for which Purpose we apply a Sponge, dipt in the Summer in cold Water, but in the Winter in what is Milkwarm. But we must be cautious in such Cases, and not make the Application in the Beginning or Increase of the Fit, but in the State or Decline thereof; for in the Beginning we make Use of odoriferous Things. *Archigenes* for a burning Fever, when near its Height, would have us apply the Sponge not only to the Face, but also to the Breast. *Actius, Tetrab. 1. Serm. 3. Cap. 170.*

4. Spongia; cinerea; cava; vaginam referens.
5. Spongia; Americana; compressa; spinosa; echinata; eleganter punctata.
6. Spongia; Americana; infundibulum referens; spinosa; echinata; eleganter punctata.
7. Spongia; flava; Priapeia; cava; mirabilis.
8. Spongia; flava; cava; cylindrica durior.
9. Spongia; fusca; cava; conica; tuberculosa; ingens.
10. Spongia; ramosa. *C. B. P. 368. Conferwæ marineæ genus. Lob. Ic. 257.*
11. Spongia; ramosissima; oculata.
12. Spongia; ramosa; fluviatilis Newtoni. *Raii H. 8.*
13. Spongia; dura; ambarum griseum penitus referens.
14. Spongia; ingens; anomala; Pelvim referens.
15. Spongia; dura; ramosa; nigra; suberis instar.
16. Spongia; ramosa; fistulosa; millepora.
17. Spongia: pulcherrima; reticulata; fistulosa; lacunata. *Boerb. Ind. Alt. Plant.*

Sponge is a soft, light, porous Plant, resembling a Fungus, and adhering to the Rocks in the Sea. Almost all Spunges are brought from the *Mediterranean* Sea. Spunges are of Use for enlarging Wounds when too small, and being burnt, afford an excellent Powder for cleaning the Teeth. There are sometimes found in Spunges some very small Corpuscles, which, by the Help of a Microscope, appear to be small *Conchæ*, which being reduced into Powder, are said to be good for the Sand and Gravel in the Kidneys, and the Scrophula, and also for Worms in Children. All these being burnt together, afford a very absorbent Powder, and emit a Smell like that of burnt Horn. *Hist. Plant. ascript. Boerhaave.*

Sponge is a very remarkable Plant, because when subjected to Distillation, it affords an urinous Spirit, exactly resembling that procured from animal Substances. Calcined Sponge is celebrated for its Virtues in curing the King's Evil, and not without Reason; for 'tis certain that in this Distemper many remarkable Cures have been performed by it.

SPONGIÆ LAPIS. *Offic. Lapis Spongia, Boet. 407. De Lact. 135. Schrod. 357. Worm. 54. Charlt. Foss. 23. Lapides in Spongiis, Matth. 1390. Spongites, Aldrov. Mus. Metall. 671. SPUNGE STONE.*

It is a Stone quite friable, concentered in a Sponge, and of a white or grey Colour. It is an Attenuant without any remarkable Heat, and is good to break the Stone in the Kidneys and Bladder, and also to discuss strumous Swellings.

The Stones found in Spunges being taken in Wine, are good to break the Stone in the Bladder. *Dioscorides, Lib. 5. Cap. 163.*

SPONGIOLI. Small Mushrooms which are produced in the Spring, and are esteemed, of all others, the best.

SPONGION. *σπόνγιον.* The Name of an Epithem, and of a Malagma, described by *Paulus Ægineta*, thus called, because said to imbibe hydropic Humours like a Sponge.

SPONGIOSUM OS. A Name for the *Os Ethmoides*, or *Cribiforme* of the Head. See *CAPUT.*

SPONGIOS. *σπόνγιος.* A Sponge.

SPONSUS. Mercury. *Rulandus.*

SPONTUM. Ashes wetted with Water, and used in the Depuration of Gold or Silver.

SPORAIDES. *σποραδεις.* An Epithet for Diseases, importing *interposed* or *diffminated*. Sporadic Diseases are such as seize particular Persons at any Time or Season, or in any

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Place; whereas epidemical Diseases are peculiar to certain Times or Seasons, and endemial to particular Places. The Word is derived from *σπείρω*, to sow, or scatter.

SPORADICI MORBI. Sporadic Diseases. See *SPORAIDES.*

SPORETOS. *σπορετός.* The Beginning of Winter, or latter End of Autumn, in which the Seed of Winter-Corn is sown.

SPOROS. *σπέρμα.* The seminal Fluid.

SPUMA. Froth or Foam. *Spuma Argenti* is *Litharge*. See *LITHARGYRUS.* *Spuma* in Chymistry, is Ashes. *Spuma Maris*, is the *Halcyonium*.

*Spuma Nitri*, is the *Apronitrum*. *Spuma trium Draconum*, is Butter of Antimony.

SPURIUS. Illegitimate. This is applied as an Epithet to various Diseases. The Ribs, also, which do not reach to the *Sternum*, are called *Spurious Ribs*.

SPUTAMEN. The same as *SPUTUM*.

SPUTUM. Prognostics from *Spit*, or Excretions by Spitting.

Tho' the Name *Sputum*, Spit, be given by Physicians to whatever comes from the Mouth, except what is discharged by Vomiting, in which Sense it comprehends all Excretions by Screation or Hawking, simple Spitting and Coughing, yet the Word is more properly applied by them to the Matter excreted by means of a Cough, and under this Acceptation we shall now consider it with respect to the Signs on which we may ground our Predictions concerning the Death or Recovery of the Patient.

The Matter discharged by Coughing, provided it be simple, and not in the least mixed with other Humours, is a mucous, pituitous Excrement distilled from the Lungs. Sometimes indeed bilious, or merely purulent Substances are discharged, but these are the Effects of very bad Disorders. Now these Excretions by Means of a Cough, to which, as was said, we shall give the Name of *Spit*, are, as *Galen* tells us, Indications of the Affections of the Lungs, Thorax, *Apera Arteria* and Throat, and, in short, of all the Organs of Respiration. And they differ from one another in Substance, Figure, Colour, Quantity, Simplicities and Mixture, Smell, Taste, Facility of Screation, an in Alleviation or Aggravation of the Pain and Cough. In respect of Substance, they are either thin or thick, viscid or not viscid; in regard to the Figure, they are called smooth, equal, round, spumous, bloody and purulent; as to Colour, they are said to be white, pale, yellow, russet, red, green, livid, black, and sometimes particoloured; in Quantity, they amount to much, or little or nothing; in respect to Simplicities and Mixture, they are either merely simple, or more or less mixed; as to their Smell, they are either said to have an ill Smell, or to have no ill Smell; in Taste they take the Epithets of insipid, sweet, salt, bitter and acrid; as to Facility or Difficulty of Excretion, we say they are easily, or with Difficulty, or by no means dischargeable by Coughing; they are also either such as mitigate or increase the Pain and Cough; and, to seek for no more Distinctions, are either concocted, or crude and malignant.

The Causes of all these different Excretions by Coughing, are to be known and understood; and, first, as to *thin* and *liquid Spit*, its Thinness proceeds, according to *Galen* on the sixth of the *Epidemics*, from the weak Heat of the Brain, which is incapable of concocting the aqueous Excrement, as are also the Lungs on the same Account, or a Defect of Heat sufficient to thicken the Humour. This Sort of *Spit*, in a Pleurisy, he makes the Beginning of Concoction, as the thick *Spit* is a Sign of perfect Concoction; for *Spit*, in its State of Maturation, grows thicker and thicker.

*Spit* becomes moderately viscid, when the thin or liquid Parts are thoroughly concocted, but an extraordinary Viscidity indicates an intense Heat resolving the Humid, by which Means, the Phlegm being agitated by a high Degree of Heat, thickens and becomes viscid. Such a Viscidity of the *Spit* is very pernicious in pleuritic and pulmonic Disorders, because it adheres so firmly to the Parts as hardly to be disengaged, and oftentimes, by obstructing the small Arteries of the Lungs, induces a Suffocation, of which *Galen, Lib. 4. de Loc. Affect. Cap. 6.* gives an Instance in *Antipater*, a Roman Physician. For in a Pleurisy, or Peripneumony, and even in an Asthma, what cannot be thrown off induces a Stertor and Ebullition, and is frequently the Cause of Suffocation or an Empyema. But a watery and fluid Phlegm, which is void of the least Viscidity, is a Sign of a weak Heat, which is incapable of consuming the thin Humidity.

A *smooth* and *equal Spit* indicates the Phlegm to be not only of one simple Substance, but that it is equally agitated in all Parts by the Heat; as one unequal and variously figur'd, indicates the contrary.



*Spumous*, or *frothy Spit*, in which the Spume continues for a considerable Time, is from a pituitous and viscid Substance, agitated with a great Degree of Heat; *Spit* remarkably spumous is justly condemned by *Galen*, *Lib. de totius Morbi Temp.* This Sort of *Spit* may proceed also from a flatulent Spirit mixed with the Phlegm, or some other Humour, as it happens when the excrementitious Parts discharged from the Lungs are mixed with a great Quantity of Air. In this respect we are told by *Paulus*, that spumous *Spit* is frequently discharged from the Throat, because it is a Part concerned in Respiration. In a Pleurisy and Peripneumony what is expectorated by Coughing appears spumous, not from a flatulent Spirit, but an igneous Heat contracted by the affected Parts. Under these Disorders, if spumous Blood appear among the *Spit*, it shews the Substance of the Lungs to be injured, as we are taught by *Galen*; and it appears from *Hippocrates*, 5 *Aph.* 13. that the spitting of spumous Blood is a certain Sign of an Ulceration in the Substance of the Lungs.

*Spit* of a round Figure expectorated by Coughing, is from a thick and tenacious Humour collected in the Fibres of the Lungs, and agitated by an extraordinary Degree of Heat, according to the Sentiments of *Galen*, *Com. in 6 Epid.* to which we add, that it takes this round Form, because the glutinous Humour contained in the Aspera Arteria, assumes the same Figure with that Part, which is globous, as having its interior Cavity turned orbicularly. I have observed this Sort of *Spit* in some Persons who were free from a Fever, and for a very long Time seemed to be no way indisposed, but at last died all of them of Consumptions. Round *Spit*, according to *Hippocrates*, 6 *Epid. Sect. 3. Aph.* 27. and *Sect. 6. Aph.* 21. indicates a Delirium, perhaps from the Heat signified by it, which, as *Galen* says, *de loc. Affect. Lib. 4. Cap. 8.* fills the Head, but it can never by itself, and alone, portend a Delirium.

Of much the same Kind with round *Spit*, is *Spit* in the Figure of Hailstones; this was observed by *Galen*, of a certain Person who could not avoid falling into a deep Consumption.

*Bloody Spit* is from an Extravasion of Blood, occasioned sometimes by an Aperture of the Mouths of the Veins, which the *Greeks* call *Anastomosis*; an Effusion of this Kind is not attended with Pain, Inflammation or Fever, and the Blood is thin and watery, and much in Quantity, if proceeding from large Veins, and but little, if issuing from smaller Vessels. Sometimes the Extravasion and consequent Hemoptoe is caused by an Erosion of the Vessels, called *Diabrosis* and *Anabrosis*, which Affection is indicated by a troublesome Cough without a manifest Cause. The Blood in the Beginning is but little in Quantity, and is evacuated at Intervals, tho' sometimes, when the Erosion is considerable, or affects the larger Vessels, there is a copious Efflux. In the third and last Place, the Hemoptoe may be occasioned by a Rupture of the Veins, which Affection is called a *Perirrhesis*, and is indicated by a Pain, especially if the Flux proceed from a Rupture of the Vessels about the Thorax or Lungs near a Membrane, and the Blood is also much in Quantity, if the Rupture be occasioned by a Redundance of Humours, violent Motion, Clamor, a Fall, a Blow, or the like. Bloody *Spit* then you see, is occasioned by an Aperture, Corrosion, or Rupture of the Veins. But in a Pleurisy this Kind of *Spit* shews that Nature attempts the Concoction of the morbid Matter by gently attenuating the same, whence the Passages being dilated for the Exhalation of the Vapours, the thinner Part, and what is next to the Vapours, takes Occasion from the Laxness of the Pores to slip through them into the internal and neighbouring Spaces, from which, by the Rise of a Cough, and Expectoration of *Spit*, an incipient Concoction is indicated. This kind of bloody *Spit* is mixed with Phlegm, and is incident to those Pleurisies which *Galen*, *Com. 3. in 6 Epid.* pronounces of the mildest Sort. But very bloody *Spit* in pleuritic Disorders, is utterly condemned by the Author of *Coac.* 390, because it is much the same as if pure Blood were expectorated, and indicates another kind of Disorder, which is either a *Diabrosis* of some of the Vessels by an acrimonious and corroding Bile attenuating the Blood, and opening the Veins; or a *Rhexis*, that is, a Rupture from a violent Compression of the Thorax, which proved ineffectual in discharging the Contents of the *Phlegmon*.

Purulent after bloody *Spit* indicates an approaching Phthisis, 7 *Aph.* 15, 16. but in a Pleurisy and Peripneumony it is a Sign of a Suppuration and Empyema, whence proceeds a Consumption; for if the peccant Matter be not removed in fourteen Days, it either destroys the Patient by Suffocation, or becomes more putrid, and is converted into Pus, the Signs of which are a Horror, either recent or increased, or violent Fever, and a Weight or Load. Agreeable to this are the Sentiments of *Hippocrates*, 2 *Aph.* 47. where he says, "That

"Pains and Fevers happen more about the Time of the Generation of Pus, than after it is generated."

With respect to the Colours of the *Spit*, or Matter excreted by Coughing, it appears white when it is either pituitous or purulent. White *Spit* from Phlegm, in pituitous Diseases, is of Service; in bilious Disorders, it is not only of no Benefit, but a bad Sign, as indicating that nothing of the Matter which causes the Distemper, for Instance a Pleurisy, is discharged. Of white *Spit* from Pus we have spoken just now.

Yellow, pale, and black *Spit*, are from Bile of the same Colours impregnating the same. *Com. 4 in 6 Epid. T. 4.* The same Author, *Lib. 2. de Loc. Affect. Cap. 9.* comprehends the Colours of *Spit*, with their various Causes, in the following Passage: "We have already shewn, he says, that all Inflammations proceed from a Conflux of Blood; wherefore if the Blood be bilious, the *Spit* will be yellow, or pale; if pituitous and spumous, the *Spit* will be white; if the Blood be melancholic, the *Spit* will be either black or livid; if none of these Humours affect the Blood, the *Spit* will be red. In Pleurisies, the *Spit* is frequently observ'd to have more of a bilious Hue, in a Peripneumony it has usually more of a phlegmatic Cast."

Party-colour'd *Spit*, according to *Galen*, indicates a Variety of Affections, and consequently a difficult and hazardous Distemper.

Much *Spit* indicates a Multitude of Humours, and if expectorated with Ease, and white and thick, shews the Phlegmon to be concocted and subdu'd. If it be much and purulent, and the Pus therein be white, smooth, equal, and not fibred, it signifies that the suppurated Phlegmon will be ended by an Excretion of the Pus. Much bilious, green, livid and black *Spit*, shews the Disease to be very crude and malignant, and very difficult to be subdu'd by Nature.

*Spit* little in Quantity with respect to the Disease, tho' concocted, is of no Service, and therefore justly to be dreaded in a Peripneumony, as we are taught by the Author of the *Coac.* 416. and find confirm'd by an Instance in *Hippocrates*, 7 *Epid. T. 58.* of the Wife of *Euxenus*.

No *Spit* at all excreted in pleuritic and peripneumonic Disorders is highly dangerous, especially when the Patient has not the Benefit of Expectoration either in the Progress or Beginning of the Disorder. Not to spit in a Pleurisy is of the same Signification as aqueous Urine in other Fevers, indicating the extraordinary crude State of the Disease, as *Galen* tells us, *Lib. 1. de Crisibus, Cap. 18.* The same Author, *Com. in 1 Aph. 12.* says, that want of spitting shews the Inflammation or Phlegmon to be difficult of Concoction, and of long Continuance. And, *Lib. de Constitut. Art. Medend. Cap. 16.* he says, that to spit nothing is pernicious, partly because it signifies that the Matter is as it were bound up in the Phlegmon, and partly in that the inward Parts are universally corrupted by its Detention. Hence the Author of the *Coac.* 381. justly pronounces dry Pleurisies, in which nothing is discharged by spitting, very dangerous. And *Galen*, *Lib. 2. de Crisibus, Cap. 10.* expresses himself to the same Purpose, as follows: "When the Disorder, he says, is exquisitely strait, and binds up, as it were, in itself the whole Flux [Confluence of Humours] it produces deadly Distempers, which are called *ἀπύσσι* (*Aptysi*) spittleless." And *Lib. de Totius Morbi Temp. Cap. 16.* he positively determines, that want of spitting, attended with great Pain and a Difficulty of Respiration, is mortal.

It is no less fatal under the same Disorders for spitting to be suppressed for no manifest Reason, as the same Author observes, *Lib. de Constit. Art. Med.* for such a Suppression, he says, *Com. 2. in Prognost.* is owing either to the Thickness and Viscidity of the Humour, or to the Laxness of the Membrane which incloses the Lungs; or, lastly, to the Weakness of the Faculty in the Patient. To the same Purpose the Author of *Prorrhet.* 97. tells us, that "They who are affected with a Pain of the Side attended with bilious Spittings, if these cease for no Reason, are seized with Madness." Here *Galen*, in his Comment on the Place, writes, that "This is not always the Consequence, but only when there is a Translocation of the bilious Humour to the Head." In a Tabes and Suppuration there is nothing worse than a Suppression of *Spit*; in the latter Case it signifies a Phthisis or Death, and in the former it portends a fatal Event. *Galen*, in 7 *Aph.* 16. says, that consumptive Persons live under their Extenuation as long as they can cleanse and free their Lungs by coughing; but when the Pus remains within, the Passages for Respiration being by that Means obstructed, the Patient is suffocated on a sudden. To the same Purpose we are told by *Hippocrates*, 7 *Aph.* 10. that "Upon spitting of Pus comes a Phthisis; and when the



"Spit is retained, the Patients die." An Excretion, also, which is weak and fruitless, and is not projected by the Lungs, but on Account of an excessive Plenitude rattles in the Throat, shews either the Redundance and Viscidity of the Humours, or the Weakness of the Faculty.

In a Pleurisy, Peripneumony, Empyema, and Tabes, for the Patient to be able to spit out readily and freely, is a very good Sign, as we are told by *Galen, Lib. de Constitut. Art. de Medend.* This in a Pleurisy and Peripneumony, shews that Nature has begun her Work of Concoction, and that the Spit has no bad Quality; and in a Suppuration it gives Hopes that the Pus may this Way be evacuated, and a Phthisis prevented. Of such Sputum we find *Hippocrates* speaking in *Prognostic.* where he says, "That in all Pains and Disorders about the Lungs and Sides, a prompt and easy Excretion is required." For this shews both the Strength of the vital Faculty, and, also, of the animal Faculty in the Brain, and that Nature's Instruments, the Muscles, are no way incommoded in Respiration by an Obstruction or Compression of the Passages; and, also, that the Matter is neither so viscid as not to be separated from the Parts, nor too thick nor too thin to be raised.

Pure, or simple and unmixed Spit, except such as is merely pituitous, is occasion'd, as we are told by *Galen, Lib. de Humoribus*, from a Consumption of all the aqueous Humidities by a flameous Heat, whence it shews an internal Burning of the Parts, and that the Disease is of a very difficult and dangerous Nature, because such Spit is of a malignant Quality, and can hardly be expectorated. *Hippocrates* in his *Prognostics* condemns pure or simple yellow Spit, but most of all black Spit when pure.

Spit appears mix'd with an aqueous Humid, when either the humid Parts are not consumed by the febrile Heat, or there is a Redundance of the pituitous Humour.

What we call various or Party-colour'd Spit, appears mixed with a Variety of Humours; and this is much worse than the former, as indicating a Complication of Disorders.

Fetid Spit, by its ill Smell, denotes a considerable Putrefaction in the Humour of which it is composed. For this Reason *Galen, Lib. de Tot. Morb. Tempor.* highly condemns very fetid Spit in a Pleurisy and Peripneumony: And *Hippocrates, Coac.* 406. 409. pronounces it mortal in an Empyema.

Insipid Spit is occasioned by crude Phlegm, sweet Spit by Phlegm concocted, bloody Spit by concocted Phlegm mixed with Blood. Salt Spit is from salt Phlegm, which acquires its Saltiness from an excessive Agitation and Assation by Heat, and, also, according to the Sentiments of the Arabian Physicians, from torrid Vapours, or a Mixture of bilious Humours. Acrimonious and bitter Spit is from yellow, ruflet and arginous Bile; acid Spit from a melancholic Humour.

Spit, by which a Mitigation of Pain is occasion'd, is esteemed very salutary, because it indicates a due Evacuation of the Humours, according to that of *Hippocrates, 1 Aph.* 25. "When Things are evacuated which require Evacuation, it conduces to Health." And, as he says in another Place, 2 *Aph.* 2. "That Sleep which removes a Delirium is good, but the contrary bad;" thus it happens in Affections of the Pleura and Lungs, that where Spit causes no Alleviation of the Pain, it is of no Service, but of worse Consequence when the Pain increases by it: For Spit which gives no Relief to the Patient under his Pain and Anxiety, though in itself of no bad Quality, prognosticates a Suppuration, according to *Hippocrates* in the following Passage of his *Prognostics*: "Whenever a Pain in those Parts is not removed either by Expectoration, or Evacuation of the Belly by Stool, or Venesection, or Medicines, or Diet, the Disorder tends to a Suppuration." And to the same Purpose he says just before, "That all Excretions which remove not the Pain are bad; but the worst of all are the black, whereas those by which the Pain is alleviated are of the best Kind."

In the same Manner, Spit by which the Cough ceases is a very good Prognostic, because it indicates that the Humour which is the Cause of the Cough and Inflammation, discharges itself the most commodious Way. Spit and Excretions which, on the contrary, excite much Coughing, are pernicious; for the Humour, either through the Depravity of the Matter detained in the Lungs, or the Weakness of the Organ, or of the Faculty, or its own Thickness, is with great Difficulty raised, and is sometimes intercluded in a narrow Passage, in such a Manner, as to occasion Suffocation. Sometimes it contracts such a Degree of Viscidity, as not to be separable from the Parts to which it adheres; and oftentimes when it is raised into the Tubes of the Lungs, is there detained, and adheres to them like Glue. Thin Spit, on account of its Diffuence and Inco-

herence, is no less difficult to be expectorated. By all these Kinds of Spit then, or Excretions, much Coughing is excited, which, on the contrary, is restrained by Spit of a moderate Consistence, and not too viscid or too thin. For such Reasons *Hippocrates*, in his *Prognostics*, utterly condemns all Expectoration of Spit which provoke much Coughing.

Concocted Spit in a Pleurisy or Peripneumony, is white, light, neither too thick nor too thin, as *Galen* says, *Com.* 2. in *Prognost.* which is easily discharg'd by Secretion, and is of equal Consistence; this is from Nature having got the better of the Distemper.

In a Suppuration, *Hippocrates Prognostic.* requires Spit which is white, pure, and free from Fetidness. And in the same Treatise he commends such Spit as is mixed with yellow Bile, especially in Pleurifies, as indicating that a great Part of the Matter which caused the Inflammation discharges itself in a due Manner. On the contrary, thin Spit, or what is too thick, or too thin, or too viscid, is of a crude Substance, and shews that Nature has not as yet concocted anything.

Of a malignant Kind are the purely yellow, ruflet, green, livid, black, party-colour'd, highly fetid Spit, with such as increases the Pain and Cough, or is attended with a great Difficulty of Respiration. And so much for the Causes of the different Kinds of Respiration; we shall now treat of the salutary Kinds of Spit.

#### *Of the good Kinds of Spit, which are Prognostics of Recovery.*

In speaking of the good Kinds of Spit, we shall first observe how they ought to be when the Subject is or is not molested with a Fever, Cough, Difficulty of Respiration, or a Pain: Secondly, what Kind of Spit is requir'd in a Pleurisy and Peripneumony: And, thirdly, what is to be desir'd in an Empyema, or Suppuration.

First then, in Affections of the Thorax, without an Inflammation or Fever, the best Spit is what is white, smooth, equal, moderately thick, with a slight Degree of Viscidity, ting'd with no bad Colour, that is to say, yellow, pale, ruflet, green, livid or black; for Spit ting'd with Colours, and especially yellow, is utterly condemned by *Galen, Lib. 4. de Loc. Affect. Cap.* 8. That Spit is, also, well circumstanced which is easily excreted, without much Coughing, and which, also, restrains a Cough, and gives Relief under a Difficulty of Respiration.

In a Pleurisy and Peripneumony, the Spit is esteem'd salutary which resembles that of Persons in Health, as we are assured by *Galen, de Crisibus, Lib. 1. Cap.* 7. for it is not possible that, when the Parts of the Thorax and Lungs are very much injur'd, the Spit should be like that of sound Persons, but there must of Necessity be a Difference. Now Spit which resembles that of healthy Persons, is never discharg'd but in the State of the Disease, at which Time there is a perfect Concoction. Hence *Galen, in 1 Aph.* 12. says, that concocted Spit is white, smooth, equal, neither too thick nor too thin, and which is easily and readily expectated. The same Author, in 6 *Epid.* tells us, that in a Pleurisy and Peripneumony, which are of a favourable Kind, the Patients have some Discharge of Spit at the Beginning of the Distemper, and that this Discharge indicates that the Concoction is begun, and that if the Matter discharged be thin, it is a Sign of a moderate Concoction, if thick, of a perfect one. And *Com.* in 1 *Aph.* he says, that for the Sick in those Disorders not to spit, indicates a very crude State of the Disease; to spit something, but of a thin Consistence, shews the Concoction is begun; for the Spit afterwards to become thicker, indicates a greater Concoction; and when it comes thick, as was said, white, smooth, equal, and is easily discharged, it indicates a perfect Concoction. The best Spit, therefore, has these Qualities; and such was that observ'd by *Hippocrates of Anaxion*, on the twenty-seventh Day, 3 *Epid. Sect.* 3. *Agr.* 8.

But this, perhaps, may be liable to Objections, if it be just what *Hippocrates* says, *Lib. Prognost.* where we read, in such Cases, "The Spit should appear deeply tinged with yellow Bile." And a little after it is said, "That an Excretion of yellow Spit, not mixed with much Blood, in the Beginning of a Peripneumony, is very salutary." To the same Purpose we are told by the Author of *Coe.* 386. "That in pleuratic Pains it is good for the Spit to be coloured," and *ibid.* 390, "That in all Pleurifies and Peripneumonies it is best when the Spit is easily and readily discharged, and has a yellow Mixture." Hence it follows, that not only white Spit is good, but, also, if yellow, bloody, and pale Matter be mixed with the same.



This indeed is very true, but not in the State or Height of the Disease, but in the Beginning or Increase of the same; for which no other Reason is to be given, than that these Kinds of *Spit* shew the Inflammation to proceed from yellow Bile and Blood, which, as *Galen* shews, is less dangerous than such as are excited by other Humours, and, also, discharges some of the Matter which is the Cause of the Inflammation; so that these Kinds of *Spit* discharg'd in the Beginning or Increase of the forementioned Disorders are not unserviceable. But if such *Spit* happens later, it is less safe, and shews that the Disease will be slow in Concoction, *Coac.* 385. 390. or of long Continuance, and not void of Danger. It is not, however, mortal, but only foreshews a long Disease; nor yet useless, as was said, because it signifies that some Part of the Humour which is the Cause of the Inflammation is evacuated, and, also, that the Inflammation itself is not of a malignant Nature, but milder, and less dangerous than when it proceeds from other Humours. Hence it appears, that neither green, nor black, nor party-colour'd *Spit* is good, since it signifies that the Inflammation is excited by very depraved Juices, and consequently that green and black *Spit* is more depraved than the yellow and bloody.

That is to be esteemed good *Spit*, also, which, besides the foremention'd Characters, has moreover this, that it is easily and freely discharged, according to that of *Hippocrates*, *Lib. Prognost.* where it is said, "That in all Disorders affecting the Parts about the Ribs and Lungs, it is requir'd that an Excretion of the *Spit* be soon and readily perform'd." It is early and seasonable enough, when it happens within the third and fourth Day; and if it be, also, of a good Kind, it is a Sign that the Disease will be short and favourable, as we are assur'd by *Galen*, *Com. 3. in Aph.* and *Lib. 1. de Crisitis*, and *Com. 3. in 6 Epid.*

*Spit* much in Quantity, and concocted, on a critical Day is a very good Sign, and one of those which are critically determining; and if it removes the Pain, Cough, and Fever, there will be no Necessity of any other Sign to pronounce it very good and critical. We have an Instance to this Purpose, *3 Epid. Sect. 3. Aigr. 8. in Anaxion*, of whom it is said, "That on the seventeenth Day he began to spit a little concocted Matter, and found some Relief; on the twenty-seventh the Fever returned, he cough'd, and expectorated plenty of concocted Matter, his Urine had a large, white Hypostasis, his Thirst went off, and he fell into a Sleep."

We may add to what has been mention'd, that this *Spit* is very good and salutary, when it appears in Conjunction with some other good Evacuation.

In Suppurations, also, the *Spit* is to have the same Qualifications as are mention'd in the aforesaid Disorders, and are requir'd by *Hippocrates*, *Lib. Prognost.* where he says, that "The best *Spit* is white, smooth, of one Colour, free from Phlegm, and expectorated without Pain, or violent Coughing." To which we may add, that it is copious, and removes the Fever, Thirst, Cough, and bad Respiration.

#### *Of bad Spit, which is a Prognostic of a fatal Event.*

We shall here, first, enumerate the bad Kinds of *Spit*, which portend a fatal Event to those who labour under no Disease, beginning with the *pituitous*.

A pituitous Matter, or *Spit*, which has for a long Time distilled from the Lungs, and is in Substance immoderately thin or thick, or viscid, much in Quantity, of a round Figure, or of a saltish or acrimonious Taste, are generally very much suspected. *Spit* very thin excites a very troublesome Cough; and the thick, by obstructing the Passages of Respiration, endangers a Suffocation; as does, also, the viscid, by long adhering to the Bronchia of the Lungs. A saltish or acrimonious *Spit*, by corroding the Arteries, paves the Way to a Hemoptoe, and from thence to spitting of Pus, and so at last to a *Phthisis*. Round *Spit*, which has been shewn before to proceed from a thick and tenacious Phlegm, agitated by excessive Heat, always renders a Person very subject to a *Phthisis*, as appears from the beforemention'd Instances recorded by *Galen*.

*Bilious Spit*, also, is condemn'd by *Galen*, especially in such as are suspected to be consumptive. This Kind of *Spit* is known by the Colour, which is either yellow, pale, or russet; and by the Taste, which is acrid or bitter. Those Colours, especially the yellow and the pale, are evident Characters of bitter Bile, as we are assur'd by *Galen*, *Lib. 2. de Loc. Affect. Cap. 10.* By the Colours, then, we manifestly discover when *Spit* is of a bilious Kind; but we are not so certain with regard to the Taste, which may be blunted and obscured by a Mixture of Phlegm. Hence Physicians, sometimes happen to be deceived in a bilious Humour concealed within the

the Lungs, because the *Spit*, tho' appearing of a yellow, pale, or russet Colour, is not observed by them to have the least Taste of Acrimony or Bitterness, when all the while the Lungs are corroded, and the *Spit* at length by this means is rendered bloody, or purulent, whence proceeds a *Phthisis*. We have Instances to this Purpose related by *Galen*, *de Locis Affect. Lib. 4.* "A certain Person, he says, on a sudden, spit out a Humour very much resembling liquid Bile in Colour, which was between yellow and pale, but of no acrid Taste; after that he continued to spit up a greater Quantity every Day, till at length a slow Fever coming upon him he began to decline, and expectorated purulent Matter, and continued so to do for the Space of four Months, when he brought up Blood with the Pus, and the Fever with the *Phthisis* increased, together with the spitting of Pus, of which he expectorated a vast Quantity. The Fever still increasing, and the Strength at last being exhausted, the Patient dy'd under all the Marks of a Consumption. I knew one who laboured under much the same Disorder for six Months, and another who lingered a long Time. The first of these Patients, with whom I was concerned, seem'd at first to be free from any Distemper, but was at last affected in a most miserable manner. The second of these Patients, whom also I attended, I endeavoured to relieve by immediate Remedies, as knowing his Disorder from the Beginning, and much more that of the third Person, who applied himself to me. But tho' I endeavoured with much Application of Thought, to effect the Cure of these Disorders, yet neither of the Persons, in the Circumstances before-mentioned, nor any one since them, could be recovered; for when they were very near their End, they spit out putrid Pieces of their very Lungs."

It seems strange that such a kind of *Spit*, when free from Bitterness and Acrimony, should corrupt the Lungs; but it is still more surprising, how the Lungs can be infected by *Spit*, which appears to be pituitous, and is free from any thing of an acrimonious, salt or bitter Taste. To account for this latter Circumstance, it must be supposed, either that all the bilious and acrimonious Humour lies concealed within the Lungs, and by adhering to their Bronchia corrodes them; or that the Phlegm, by Putrefaction, acquires an Acrimony, by which it is rendered capable of corroding and putrefying the Lungs; in the same manner, perhaps, as when the Air, being infected with a phthical Contagion, or rendered highly acrimonious, infects the Lungs of those who live and breathe in it. But how comes it to pass, when the *Spit* appears yellow or pale, but has nothing in its Taste of Acrimony, Saltiness or Bitterness, the Subject should fall into a Consumption? The Reason of this is, because by the Mixture of the pituitous Humour in them, the Taste is more easily concealed and disguised than the Colour, and that a most acrimonious and highly putrid Humour, by its Distillation upon the Lungs, corrodes them: Or, it must be said, that the Appearance of this same yellow and pale *Spit* is a Sign of a Collection of much bilious Humour within the Lungs, by which they are putrefy'd and corroded, and the Patient brought into a Consumption.

Black and melancholic *Spit* is of a very bad kind, as appears from *Galen*, *Lib. de Constit. Art. Med. Cap. 16.* where he writes, that a melancholic Humour, when predominant, is very pernicious, both on account of its very bad Qualities, and that it is highly corrosive, difficult of Concoction, and not easy to be expelled; and, also, because it indicates an extraordinary Heat, which is necessary for its Generation and Attrition. *Spit* of this Kind is frequently succeeded by *Bloody Spit*, which is more to be dreaded by Persons in Health than under a Pleurisy, agreeably to that of *Hippocrates*, *4 Aph. 25.* "Blood of any kind discharged upwards is bad." In such *Spit* Blood thrown up by a Cough is always to be dreaded, tho' it be not constantly succeeded by a mortal Distemper, especially if it distils from the Head upon the Fauces, and is thence discharged by Help of a Cough, as I experienced in myself, when after a quartan Fever I threw up a great Quantity of Blood by Coughing, which was a critical Excretion, and removed the Fever. But whenever it is not the Matter of a Distillation from the Head, but proceeds from the Breast and Lungs, it induces Danger of a *Phthisis*. *Galen*, indeed, *Lib. 5. Meth. Med.* writes, that he recovered a *Roman* Matron and a young Man of an Hemoptoe, and all others who applied to him for the same Disorder, on the first Day of their Illness; but as for those who delayed it for some Days, or till a Phlegmon had seized them in such a manner as to render their Urine like that of feverish Persons, he never knew one of them perfectly cured. Justly, therefore, is spitting of Pus, after spitting of Blood, pronounced by *Hippocrates*, *7 Aph. 15.* a bad Sign: and *Galen*, in his Comment, truly says, that all spitting of Blood is not malignant, but such as is succeeded by Pus, for this induces



induces a Phthisis, according to 7 *Aph.* 16. which says, "After spitting of Pus comes a Phthisis." We have just Reason, therefore, to conclude, that bloody *Spit* expectorated from the Breast and Lungs, and succeeded by a Discharge of Pus, is a mortal Prognostic.

All copious Discharges of *Spit*, also, which no way relieve the Patient, nor alleviate the Pain, Cough, or Difficulty of Respiration, are always useless, and portend a bad Event. And these are the bad Kinds of *Spit* in the Subjects before-mentioned.

In Persons under a Pleurisy or Peripneumony, *Spit* very thin, or very thick, or viscid after the Beginning or first Days of the Disorder; also *Spit* which is spumous, round, copious but useless, scanty or none; *Spit* suppressed, frequent, white, yellow, pale, russet, green, æruginous, porraceous, of a deep yellow, livid, black, parti-coloured, fetid, pure or unmixed, excreted with great Difficulty, or with a Stertor and Rattling in the Throat, and such as no way mitigates the Pain, Cough, and Difficulty of Respiration, are all condemned; but the worst of all, and most destructive, is what excites and exasperates the Cough, Pain, Difficulty of Respiration, and Fever.

*Spit* very thin, or very thick and viscid, which Kinds indicate the Disease to be considerably crude, if they happen in the Beginning, are esteemed not wholly unserviceable, since they give Hopes that they may be concocted in Time; but if they appear afterwards, that is to say, after many Days, and are not concocted, they are very bad Signs. *Spit* very spumous is also condemned, and more particularly the unmixed, bilious, russet, green, livid and black; for these Kinds, as we have shewn, proceed from an immoderate Burning, or colliquative Heat.

Whitish *Spit*, and what is spumous, consisting of Phlegm agitated by Flatulences, as in the Case when the pituitous Matter in its Passage from the Lungs becomes spumescient by contracting much Air, are not so dangerous. In a Peripneumony the Blood which is discharged by Spitting is generally spumous. The Author of the *Coac.* 408. says, "That in a Pain of the Right Hypochondrium, the spumous Blood discharged by spitting flows from the Liver, and the Patient generally dies."

*Spit* of a round Figure is very much condemned, because it is a Sign of an immoderate internal Heat, by which the Humour is dried; the same *Spit*, perhaps on account of a Repletion of the Head by the same inward Heat, is said by *Hippocrates*, 6 *Epid. Sect.* 3. *Aph.* 27. and *Sect.* 6. *Aph.* 21. to portend a Delirium. The Author of the *Coac.* 390. condemns round *Spit*, as pernicious in a Pleurisy; but *Hippocrates*, *Lib. Prognost.* says more justly, "That round white *Spit*, in pleuritic Disorders, is of no Service to the Patient."

Much *Spit* of a bad kind portends a great deal of Danger, especially if it appears on a critical Day, and no way relieves the Patient; for it is to be esteemed one of the critical Signs which determine nothing.

*Spit* little in Quantity is no less condemned, as being insufficient to purge off the Humour which is the Cause of the Inflammation; but most of all is it to be dreaded, when it is not only scanty but crude, and excreted with much Difficulty. Of Patients under this Circumstance we find *Hippocrates* speaking, 1 *Epid. Sect.* 1. "They expectorated, he says, by Coughing, a dense, concocted Matter, little in Quantity, which they brought up by Degrees, and with much Difficulty; but in those who laboured under the most violent Symptoms, the *Spit* had no Signs of Concoction, but was perpetually crude."

Under a Pleurisy not to spit at all is of no less fatal Signification, as indicating the Disease to be in a highly crude State: See the Quotations from *Galen* to this Purpose before, under the Causes of no *Spit*. This Absence of *Spit*, then, must of Necessity shew the Matter of the Disorder to be difficult of Concoction, and consequently portend the long Continuance of the Inflammation, as we are told by *Galen*, *Com.* 1. in *Aph.* 10. For the same Reason the Author of the *Coac.* 381. says, "That dry Pleurisy, in which nothing is evacuated by Spitting, are very dangerous."

*Bilious Spit*, in the same Disorders, suppressed without Reason, after it had at first appeared, portends a Delirium, according to the Author of 1 *Prorrh.* 97. and is said by *Galen*, *Lib. de Const. Art. Med. Cap.* 16. to be a Sign of approaching Death; consumptive People, also, live as long as they can bring up their *Spit*, but when that is retained they die. 7 *Aph.* 26.

Frequent *Spit*, but not discharged by Coughing, if attended with any other phrenitical Sign, indicates a Phrensy, according to the Author of 1 *Prorrh.* 6. And a little after the same Author, 7. 12. utterly condemns frequent Spitting in Fevers; and indeed justly, because, as *Galen* expresses it, it

is a Sign of a disordered Brain, which suffers under a Repletion. Again, 1 *Prorrh.* 31. this frequent Spitting, attended with a Perfrigeration, is said to be the Forerunner of black Vomiting, which is a most pernicious Symptom.

*White, pituitous Spit*, in bilious Diseases, is of no Service to the Patient, according to *Hippocrates* in *Prognostic.* where it said, "That white, glutinous and round *Spit*, is of no Benefit;" and for a good Reason, as indicating that nothing of the Humour, which is the Cause of the Inflammation, is discharged, which in Inflammations from Bile is none of the least pernicious Signs. Some Years ago there raged at *Bassano* and *Morostica* a pestilential Pleurisy, which proved mortal in four, or at the most in seven Days. Under this Disorder whatever was excreted by Spitting, was of a white pituitous Substance, which a certain Physician not well versed in *Galen's* Doctrine, took for a good Sign, and always had good Hopes of the Patient. But he still found himself deceived, as not knowing that those white pituitous Spittings were an Indication that the morbid Matter of the Inflammation was not thereby evacuated, and consequently that the Disease was highly crude and pernicious. This is confirmed by an Instance in *Hippocrates*, 7 *Epid. T.* 58. of the Wife of *Euxenus*, who had a Cough, and spit up a white, thin Matter, and but little at a Time, and dy'd at last of a Pleurisy.

*Yellow and pale Spit*, also what is bloody, not well mixed, if they are first discharged after the Beginning, or first State of the Disorder, indicate the same to be difficult of Concoction, of long Continuance, and therefore by no means void of Danger. On the contrary, if they appear in the Beginning, they shew that the Disease will have an easy Solution, as we observed before. Of the yellow and russet kinds of *Spit* it is observed in the *Prognostics*, that if they happen a considerable Time after the Beginning of the Disease, they are very bad; or, as it is expressed a little after, if they appear not till the seventh Day, or later, they are less secure.

*Pale, russet, green, deep red, livid and black Spit*, are of the same Prognostication; *green* and *æruginous Spit* indicate much Heat and Adustion, with Plenty of æruginous Bile. *Hippocrates*, in the *Prognostics*, utterly condemns the deep green *Spit*, as *Galen*, *Lib. de tot. Morb. Temp.* does the deep red, as highly pernicious.

*Livid Spit* is still more dangerous, as proceeding from a Redundance of black Bile, or Extinction of the natural Heat, and is therefore justly condemned by the Author of the *Coac.* 390, if appearing in the Beginning of a Disease.

*Spit* of a black Colour is the most pernicious and fatal of all the Kinds, because it proceeds, as we have already observed from *Galen*, *Lib. 1. de Crisibus*, from a vehement Affection, or an universal Refrigeration, on account of the Extinction of the natural Heat. Justly, therefore, does he make it an Indication of a most formidable Disease, and *Lib. 1. de Cris.* a Prognostic of Death. The Author of the *Coac.* 390, 407. tells us, that they who throw up a black Matter by Vomiting are in a dangerous State. *Hippocrates*, *Lib. 3. de Morb.* says, that those who cast up black Clots of Blood by Coughing, die on the seventh Day.

*Spit* of various Colours seems to be no less destructive, as it indicates a Multiplicity of Disorders; for which Reason *Hippocrates* pronounces this kind of *Spit*, attending an acute Pain, mortal.

*Spit simple or unmixed* is always condemned, for good *Spit* ought to be of a mixed kind; and the contrary to this is bad, but especially the pure and undiluted, as proceeding from a Consumption of all the serous Humidity by the Heat.

We conclude, then, that in Pleurisies and Peripneumonies, *Spit* of a yellow Colour, simple or unmixed, russet, æruginous; *Spit* of a deep red, or livid, but most of all black, and pure or undiluted, are of bad Prognostication, and are condemned as such by *Hippocrates*, in his Book of *Prognostics*; for they are too sure Indications of a desperate Disease.

*Fetid Spit* is, also, constantly condemned in acute Diseases, because it is an Indication of an extraordinary Putrefaction. *Hippocrates*, 5 *Aph.* 11. makes the ill Smell of the *Spit* a distinguishing Character of Persons in a Consumption, and also a mortal Symptom.

*Spit* discharged with much Difficulty by Secrecion has been censured as bad, agreeably to the Observation of *Hippocrates*, 1 *Epid. Sect.* 1. before quoted.

*Spit* which rattles in the Throat, and induces a *Cerebrus* or *Stertor*, is no less to be condemned; of such we find *Hippocrates*, in *Prognost.* thus pronouncing: "Bad, also, says he, is the *Spit* which cannot be worked off, or ejected by the Lungs, but fills and rattles, or bubbles in the Throat."

In the same List of the bad Kinds of *Spit* are to be reckoned those which are so far from mitigating, that they increase



and exasperate the Cough, according to the Book of *Prognostics*, which passes the same Censure on those which mitigate not a Pain. These, however, are not sufficient for a Prediction, unless accompanied with other Signs, which, as *Galen* says, are accurately to be considered.

Other Kinds of bad *Spit* are such as (tho' frequent and troublesome) neither remove a Difficulty of Respiration, nor a Cough, nor a Fever.

Lastly, a Discharge of *Spit* on a critical Day, after which the Patient finds himself in a worse State than before, if accompanied with some other bad Sign, is succeeded by inevitable Death.

And these are the kinds of *Spit* which are to be condemned in a Pleurisy and Peripneumony. See *PHTHISIS*. *Prosper Alpinus de Presag. Vit. & Mort.*

**SPYRAS**, or **SPYRATHOS**. σπυράς, or σπυράθος. The Dung of Goats in small round Balls. Goats Tricklings. *Hippocrates* advises to use these by way of Suffumigation in Disorders of the Uterus.

**SQUALOR**. See *AUCHMOS*.

**SQUALUS**. The Name of a Fish mentioned by *Aldrovandus*.

**SQUAMA ÆRIS**. See *ÆS*.

**SQUAMARIA**, & **SQUAMATA**. Offic. *Orobancha radice dentatâ major*, C. B. P. 88. *Raii Hist.* 2. 1229. *Orobancha radice dentatâ*, sive *Dentaria Major Matthioli*, Park. Theat. 1363. *Dentaria major Matthioli*, Ger. 1387. *Emac.* 1585. *Anablatum Cordi*, sive *Aphyllon*, J. B. 2. 783. *Raii Synop.* 3. 288. **TOOTH-WORT**.

It grows on the shady Banks of Hedges, and flowers in April.

Tooth-wort is consolidating, conglutinating, and good in Hernias, Wounds, and various Affections proceeding from Fluxions.

**SQUAMOSA SUTURA**. The squamose Suture of the Skull.

**SQUATINA**. Offic. *Aldrov. de Pisc.* 471. *Salv. de Aquat.* 152. *Rondel. de Pisc.* 1. 367. *Bellon. de Aquat.* 78. *Raii Ichth.* 79. *Ejusd. Synop. Pisc.* 26. *Charlt. Pisc.* 12. *Gesn. de Aquat.* 899. *Jonst. de Pisc.* 23. *Mer. Pin.* 186. **THE KING-STONE, OR MONK-FISH**.

It is taken in the *British* and other Seas. The Eggs, Skin and Ashes, are used. The dried Eggs are found to be very serviceable in stopping a Looseness, by the Experience of the Fishermen, who use it for all manner of Fluxes of the Belly. *Rondel.* Of the Skin is prepared an excellent *Smegma* for the Plora and Scabies, and the Ashes are effectual against the *Alopecia* and *Achors*. *Aldrovand.*

The Skin of this Fish is recommended, by *Galen*, for rubbing Parts affected with an *Alopecia*.

**SQUILLA**, in Botany, is the same as *SCILLA*; which see.

**SQUILLA**, Offic. *Squilla gibba*, Schonef. *Ichth.* 72. *Rondel. de Pisc.* 1. 549. *Squilla parva*, Mer. *Pin.* 192. *Squilla gibba Rondeletii*, *Aldrov. de Exang.* 150. **THE SHRIMP**.

It is taken in the Sea, and agrees in Virtues with the *Asellus*, Lobster.

**SQUILLINUM**, *AZIZA*. Horse-Dung. *Rulandus*.

**SQUINANTHIA**. A barbarous Word importing a Quinsy.

**SQUINANTHUM**. The same as *SCHÆNANTHUM*.

**SRINT**. The *Hungarian* Name for any inflammatory Tumor in the Mouth, Throat, or Anus.

**STAC**. Coagulation, or Congelation. *Rulandus*.

**STACHYS**.

The Characters are;

The Leaves, Stalks and Branches are hairy, hoary, and covered with a very soft Down. The Galea is fornicated, or arched, erect, and somewhat bifid; the Beard trifid, the middle Segment large and pendulous. The Flowers are disposed of at first in thick Whorles, but towards the Top in Spikes.

*Boerhaave* mentions thirteen Sorts of *Stachys*, which are;

1. *Stachys*; major; Germanica. C. B. P. 236. *Sideritis*, *Heraclea Dioscoridis*, Col. *Phytob.* 1. 31.

2. *Stachys*; major; Germanica; folio angustiore, *Flor.* 2. 66.

3. *Stachys*; Cretica; pro Pseudo-Stachyde I. in *Prodromo describitur*. C. B. P. 236. *Prodr.* 113.

4. *Stachys*; Alpina; magna; flore ex albo rufescente. *Pseudo-Stachys Alpina*, C. B. P. 236. *Prodr.* 113.

5. *Stachys*; Creticæ similis; flore purpureo triplo majore.

6. *Stachys*; minor; Italica. C. B. P. 236. *Tourn. Inst.* 186. *Boerb. Ind. A.* 154. *Stachys*, Offic. Ger. 563. *Emac.*

695. *Raii Hist.* 1. 554. *Stachys Dioscoridis*, Park. Theat. 47. **BASE HORE-HOUND**.

The *Stachys* is a shrubby Plant, resembling *Marrubium*, but somewhat longer, and producing numerous rare, hard, and somewhat hairy Leaves, white, and of a pleasant Smell, with several Stalks, which shoot up from one Root, and are whiter than those of *Marrubium*; it grows in mountainous and rugged Places. *Stachys* is of an acrimonious and heating Quality; for which reason a Decoction of the Leaves being drank, provokes the Menfes, and expels the Secundines. *Dioscorides*, Lib. 3. Cap. 120.

It is cultivated with us in Gardens, and flowers in June.

7. *Stachys*; verticillata; odora; *Betonica foliis pallidis*. H. C. 2.

8. *Stachys*; Canariensis; frutescens; Verbaci folio. T. 186. *Salvia sylvestris*; amplissimis *Verbascifoliis*; *graveolens*, flore albo, parva, *Canariensis*, Pluk. *Almag. & Phytogr.* T. 322.

9. *Stachys*; hormini folio obscure virenti; flore ferrugineo; M. H. Bloef. 198.

10. *Stachys*; spinosa; Cretica. C. B. P. 236. *Gaidarothymum*. Alpin. Exot. 86.

11. *Stachys*; orientalis; altissima; foetidissima. T. Cor. 12.

12. *Stachys*; alba; latifolia; major.

13. *Stachys*; Cretica; latifolia; T. 186. *Boerb. Ind. Alt. Plant.*

All these Species of *Stachys* have a very strong and rank Smell; whence they are good in hystERIC, apoplectic, and epileptic Disorders. *Hist. Plant. ascript. Boerb.*

**STACTE**. See *MYRRHA*. In another sense it imports a Lixivium distilling from Ashes; or it signifies Brine.

**STACTICON**. στακτικόν. The Name of a Collyrium in *Scribonius Largus*, N° 34. and in *Paulus Ægineta*, L. 7. C. 16.

**STADIEUS**. σταδιός. A Person who walks a Stadium. *Galen. Exegef.*

**STAIS**. σταίς. Meal moistened with Water, and kneaded with the Hands; or it signifies Fat or Suet.

**STAGIUM**. The same as *Sextula*, the sixth Part of an Ounce, that is, four Scruples.

**STAGMA**. A Liquor exposed to Distillation. *Blancard.*

**STAGNEA VASA**. Vessels tinned on the Inside; or incruusted, or lined, in order the better to preserve their Contents. *Scribonius Largus.*

**STAGONIAS**. σταγονίας, from σταίς, to distil. An Epithet for that Species of Male Frankincense which is in small round Lumps, like Drops.

**STALAGMA**. A distilled Liquor. *Blancard.*

**STALAGMOS**. σταλαγμός. A Distillation from the Head.

**STALTICA**. σάλτικα, from σάλλω, to contract. Repellents; or Medicines which render the Lips of Wounds even.

**STAMINA**. See the Explication of Terms under the Article *BOTANY*.

**STAMNOS**. στάμνος. An Urn, or Basin for holding Water.

**STANNAR**. The Mother of Metals, or the occult Fume of which Metals are generated. *Rulandus.*

**STANNUM**. Tin. See *JUPITER*.

**STAPES**. The Name of a Bone in the internal Ear. See *AURIS*.

**STAPHIS**. A Raisin.

**STAPHISAGRIA**. Staves-acre. A Name for the *Delphinium*; *Platani folio*; *Staphisagria dista*.

**STAPHYLÉ**. σταφυλή. A Grape. Or a Disorder of the Uvula, which consists in an Extenuation of its superior Part, and a Tumor of the inferior; whence it depends in the shape of a Grape. The Uvula, or Gargareon, is, also, thus called.

**STAPHYLEPARTES**. σταφυλιπάρτης. A Chirurgical Instrument for elevating the Uvula, mentioned by *Paulus Ægineta*, L. 3. C. 16.

**STAPHYLINUS**. A Name for the *Daucus Vulgaris*.

**STAPHYLIS**. σταφυλís. In *Moschion, de Morbis Mulierum*, C. 116. this is a sort of Cup for feeding Children, contrived with an Orifice resembling a Nipple, or a Grape.

**STAPHYLODENDRON**.

The Characters are;

The Calyx is pentaphylloidal, caducous and expanded; the Flower rosaceous, pentapetalous, erect, as it were, in the Figure of a Bell, and furnished with five Stamina. The Ovary, in the Bottom of the Calyx, is furnished with two Tubes, and becomes a membranaceous Fruit inflated like a Bladder, and divided into Capsules full of stony Seeds.

*Boerhaave* mentions four Sorts of *Staphylodendron*, which are;



1. *Staphylodendron*, *Offic.* J. B. 1. 247. *Raii Hist.* 2. 1681. *Synop.* 3. 468. *Tourn. Inst.* 616. *Boerb. Ind. A.* 2. 235. *Pistachia sylvestris*, C. B. P. 401. *Nux Vescaria*, Ger. 1249. *Emac.* 1437. *Park. Theat.* 1417. THE BLADDER NUT-TREE.

It is sometimes found in Hedges, flowers in May, and the Nuts are ripe in Autumn. The Nuts are by some supposed to have the same Virtues with Pistachios.

*Ray* says, that he knows no Use of them in Medicine, but that they serve the poorer sort of People in many Places instead of Beads, to number their Prayers. *Raii Hist. Plant.*

2. *Staphylodendron*; *Virginianum*; *trifoliatum*. *H. L. Pistacia sylvestris, trifolia, Virginensis.* H. R. Par.

3. *Staphylodendron*; *Africanum*; *folio singulari, lucido, Par. Bat.*

4. *Staphylodendron*; *Africanum*; *folio lanuginoso Rosmarini latiori.* *Boerb. Ind. Alt. Plant.*

It has its Name from *σταφύλη*, (*Staphyle*) a Grape, and *δένδρον*, (*Dendron*) a Tree; because its Fruit grows in Clusters.

*Scaliger* says that the Nuts are eatable, and that he has often eat them instead of Pistachios. From the Seeds is expressed an Oil of a resolvent Virtue. *Hist. Plant. ascript. Boerb.*

STAPHYLOMA. A Disorder of the Eye. See OCULUS.

STARAPHAXAT. A restraining Medicine, or one which restrains Fluxions. *Rulandus.*

STASIS. στάσις. A Stagnation.

STATER. στατήρ. A Weight equal to four Drams.

STATHEUSIS. σταθυσίς, or στατισίς, from *στατίω*, to roast by a slow Fire. A gentle or imperfect roasting, or toasting.

STATICA. The same as STALTICA.

STATICE.

The Characters are;

The Root is fibrous and perennial, the Leaves grassy, and the Stalk naked. The Calyx being squamous, membranaceous, and consisting of a Multiplicity of Series of Squamæ, is common. The Floscules are polypetalous, resembling Clove-Gilly Flowers, each seated in its proper Calycle, which is shaped like a Funnel, monophyllous, and deeply cut into Segments. These Floscules are collected in great Numbers together into one floriferous globular Head, surrounded by that one common squamous Calyx before described. The Ovary proceeding from the Center of the Calycle consists of five Eggs, which grow together in a Circle round the Basis of the Placenta, and are each furnished with a long Tube.

*Boerhaave* mentions four Sorts of *Statice*, which are;

1. *Statice*, *Lugdun.* 1190. *Scabiosa, montana, globoflo, gramineis foliis, latioribus.* *Caryophyllus, montanus, major, flore globoflo,* C. B. P. 211. *Gramen Polyanthemum, majus.* *Dod.* p. 564. *Armerius, montanus, tenuifolius, major.* *Clus. H.* 287. *Limonium majus, flore globoflo.* M. H. 3. 600.

2. *Statice*; *foliis angustioribus*; *flore rubro.* *Scabiosa, montana, globoflo, gramineis foliis angustioribus, flore rubro.* H. L.

3. *Statice*; *foliis angustioribus*; *flore albo,* *Scabiosa, montana, globoflo, gramineis foliis angustioribus, flore albo.* H. L.

4. *Statice*; *montana*; *minima.* T. 341. *Scabiosa, montana, globoflo, gramineis foliis angustissimis, minima.* H. L. *Caryophyllus montanus, minimus, flore globoflo.* H. R. Par. *Armerius montanus, tenuifolius, minor.* *Clus. H.* 287. *Limonium minimum, vulgatus, flore globoflo,* M. H. 3. 601. *Boerb. Ind. Alt. Plant.*

*Dodonæus* pretends that the *Statice* is of no Use in Medicine, but that the Flowers are beautiful enough in Garlands. But *Dalechampius* assures us, that the whole Plant is of an astringent Taste, and is of surprising Virtue in drying up and repressing the Eruptions of Humors, being either bruised and applied, or the Juice of it drank; that it cures the Dysentery, an excessive Flux of the Menfes, Bleeding at the Nose, and spitting of Blood; that it is also a Vulnerary, and cicatrises malignant Ulcers.

It is astringent, whence it is of Use in immoderate Fluxes, and may be of service in Disorders proceeding from a Laxness of Fibres, and where the Humors are too fluid, and disposed to Eruptions. *Hist. Plant. ascript. Boerhaave.*

STATIONARIÆ FEBRES. Stationary Fevers.

There are certain general Constitutions of Years, which owe their Origin neither to Heat, Cold, Dryness, nor Moisture, but rather depend upon a certain secret and inexplicable Alteration in the Bowels of the Earth, whence the Air becomes impregnated with such Kinds of Effluvia as subject the human Body to particular Distempers, so long as that Kind of Constitution prevails, which, after a certain Course of Years, declines, and gives way to another. Each of these general Constitutions is attended with its own proper and peculiar Kind of Fever, which never appears in any other; and

therefore I call this Kind of Fevers Stationary. *Sydenham.*

STATIVA. The same as STALTICA.

STATUS. The Constitution, or State of any thing, and in this sense it is the same as CATASTASIS. It, also, imports the same as ACME.

STAXIS. στάσις, or ἀπὸ στασις, from *στάω*, to distil. A Discharge of Blood from the Nose by Drops. This is the general signification of the Word *στάσις*, in *Hippocrates*, tho' sometimes he adds *ἐκ ῥινῶν*, or *ἀπὸ ῥινῶν*, "from the Nostrils."

A *Staxis*, in the Doctrine of *Crises*, is justly condemned as indicating a Weakness and Decay of Strength in Nature. Thus, 1 *Prorrh.* it is said, *ἰνδικαλαίωσι στάσις δύσκολαι*, "Distillations of Blood from the Nose on the eleventh Day are bad," where *Galen* on the Place condemns all such Distillations. The same is repeated, *Coac.* 336. And *Coac.* 57. we are told that *στάσις ἰσάχεται κακὰ*, "small Distillations of Blood from the Nose are bad;" particularly in Pleuritis and Phrenzies. Such Distillations are condemned as very bad Signs, *Coac.* 405. 227. 1 *Prorrh.* 1. On the contrary, free and copious Discharges of Blood from the Nose are, in the Doctrine of Signs and Crises, esteemed a Solution of the Disease, according to that in 1 *Epid. Scd.* 1. where we read that *ἀμφοτέρωθεν λαύραι*, &c. "copious Hæmorrhages from the Nose for the most part relieved the Patients." And not only small and sparing Eruptions of Blood from the Nostrils, which stop within their due Measure, but all weak, small and imperfect Excretions, whether by Urine, Vomit or Stool, are condemned as bad Prognostics, *Coac.* 400. and the Judgment there passed upon them is confirmed by Matter of Fact in many Cases recorded in the *Epidemics*.

STEAR. στέαρ, in *Hippocrates*, sometimes signifies simply Fat, as in many Places of the Books *de Morbis Mulieb.* Sometimes it signifies not only Fat, but Leaven or Dough, or Paste, in the same sense as *στάς*, *Stais*. Thus (*Lib.* 1. *περὶ γυναικ.*) *ταῖς ἰσθμῶν ὡς διορ στέαρ γέσθαι*, "Boil them till they become like a Lump of Dough;" which is repeated in Words to the same Effect, *Lib.* *περὶ γυναικ. φν.* And *Dioscorides*, *Lib.* 2. *Cap.* 202. *στάς δὲ ἡ πηλὸν περιπλάσσεται*, "It is wrapped up in Paste or Clay," where tho' the printed Editions read the Word *σταῖς*, yet that the ancient Reading ought not to be changed, appears from *Pliny*, *L.* 20. *C.* 9. who seems to have read *στάς*, and to have mistranslated it *Adeps*, where he says, *Coquitur plurimis modis; in olla quæ conficiatur in Clibanum aut Furnum, vel Adipe aut Luto illita.* "It is prepared many Ways, either by baking it in a Pot, or dawbing it over with Fat or Clay." Again, *Dioscorides*, *Lib.* 5. *Cap.* 99. says of *Stibium*, *ἐπιστῆναι δὲ στάσι περιπλάσσον, &c.* "It is wrapped up in Paste, and so roasted under the Coals." Where *Pliny* again, *Lib.* 33. *Cap.* 6. translates the Word by *Adeps*. *Galen*, *Lib.* 2. *ἔ* 5. *de C. M. S. L.* uses the Words *στάσις* and *σταῖς* in the same sense; I mean, as signifying Paste or Dough, or some such Composition; and *Hesychius* expounds *στάς* by *λίπος*, *ζύμη*, "Fat, Leaven." *Parsus.*

STEATOCELE. From *στάς*, Suet, and *κήλη*, a *Hernia*. A Species of *Hernia*, caused by a Collection of a Substance in the *Scrotum*, resembling Suet.

STEATOMA. *στέατωμα*, from *στάς*, Suet. A Species of Tumor, containing in a *Cystis*, or Bag, a Substance resembling Suet. In the *Definitiones* ascribed to *Galen*, *Steatoma* is described, a preternatural Increase of Fat.

STEGNOSIS. Constipation, Condensation or Obstruction.

STEGNOTICA. στεγνωτικά. Astringents, from *στεγνῶ*, to brace up.

STEILÆUS. *στειλαῖς*. The Handle of an Instrument. *Hippocrates.*

STEECHIEA. *στελεχία*, from the preceding Word. An Epithet for the *Vena Portæ*. *Galen.*

STEECHITES. The Name of a Stone found in some Parts of Germany, about the Size of a Finger, of the same Nature as the *BREMNIERES*. It is esteemed desiccative, and good to clean the Teeth, as a Dentifrice.

STELENCHIS, or STLENCHIS. *στελεγχίς*, or *σλεγχίς*. A *Strigil*, an Instrument used in the ancient Baths to rub off Sweat.

STELLA. A Star. See ASTRONOMIA.

STELLA MARINA. The Star-Fish, a Sort of Sea Insect, of which there are many Species. They are esteemed opening, if taken by way of Decoction; and their Smoke when burned, is said to cure the Epilepsy.

STELLA OCCIDENS; is *Sal Ammoniac*.

STELLA TERRÆ, is Tale.

STELLARIA AQUATICA. Water Star-Wort, or star-headed Water Chickweed. *Raii Hist. Plant.*

STELLARIS LAPIS. See ASTRORITES.

STELLIO. A small Species of Lizard, or Est, marked upon the Back with Spots resembling Stars. The Bite of this Animal is said to inspissate the Humours, and stupify the Senses; to remedy which, Venice Treacle and volatile Salts



are recommended. The Flesh is said to excite Sweat, and resist Poison. *Lemery des Drogues.*

STELLIO ADUSTA, is Cinnabar. *Rulandus.*

STEMA. *σῆμα.* The Penis. *Ruffus Ephesius.*

STEMPHYLA. *στέφυλα.* The Husks of Vines; or the Mass remaining after the Wine is pressed out of the Grapes. Sometimes this Word is applied to the Recrements of Olives, after the Oil is pressed out.

STEMPHYLLITES. *στέφυλλίτης.* A Sort of Wine; the same as LORA.

STENYGROCHORIE. *στυγροχόρη,* so *Galen* reads the Word, *Lib. de Artic.* whereas all the Copies have it *στυχοχόρη,* (*Stenochorie.*) The Word seems derived from the Verb *στυγρῶσαι* (*Stenygrofai,*) which *Galen*, in his *Exegesis*, expounds by *συνῶσαι* (*Stenosai,*) to straiten; and adds that some will have it to import a straitening, obstructing the Passages of the Humours, and drying them up. This Sense agrees with *Erotian*, who makes *στυγρῶσαι* to mean the same as *ἀποστυγρῶσαι* καὶ πυκνῶσαι τὸν τινα ἐν ᾧ ὑγρὰ ἔστι, “To straiten and block up “a Place in which is some Humidity.” Those Expositions have certainly a Relation to the first Aphorism of the second Section of the sixth of the Epidemics, and prove the Word *στυγρὸς* to be compounded of *σύνδς*, narrow, and *ὕγρδς*, moist. *Galen*, however, in his Comment on this Aphorism, denies this, and asserts that the second Syllable is attenuated and not aspirated, because the Word *ὕγρδς* is not contained in it; and that the Word *στυγρὸς*, with the *Ionians*, signifies no more nor less than *σύνδς*, which he proves by the Authority of *Simonides*, who has *μῦθος στυγρῆ συμπίσων ἐν ἀτραπῷ*, “Meeting “alone in a narrow Path,” which Quotation is very corruptly read, *Com. 1. in Lib. de Artic.* where, on the Word *στυγροχόρη,* *Galen* approves of the same Etymology, as not deriving from *σύνδς*, and *ὕγρδς*, and *χώρᾱ* (*Chora*, a Place) but from *στυγρὸς*, which signifies no more than *σύνδς*; so that *στυγροχόρη* is no more than *συνῶχρη*, and this no more than *σύνδς*, Narrowness. Hence it appears, as was observed in the Beginning, that for *συνῶχρη*, as it is generally read, *Galen* reads *στυγροχόρη*. The Verb *στυγρῶσαι* is by the same Author, *Com. 1. in 6 Epid.* expounded by *πυκνῶσαι*, to condense, and *συνῶσαι*, to straiten; since it is opposed to *διεῖναι*, to dilate. And by the Doctrine of *Hippocrates*, Things dilated are to be closed by Astringent and Refrigeration.

STEPHANIAEUS. *στέφαναιος*, Coronary. See CORONARIA, and CORONALIS.

STERA. A barbarous Word, signifying the Uterus, by Corruption for *στέρα*.

STERCUMEZEFF, or STERCORUMECEFF. Licharge. *Rulandus. Johnson.*

STERCUS. Dung. See FIMUS.

STERGETHRON. A Name for the larger Aizon, Houleek.

STERILITAS. See BALSAMICA.

STERIPHNOS. The same as STRUPHNOS.

STERNO-COSTALES, *vulgo Triangulares Sterni.*

These are five Pairs of fleshy Planes disposed more or less obliquely on each Side the Sternum, on the Inside of the Cartilages of the second, third, fourth, fifth and sixth true Ribs.

They are inserted by one Extremity in the Edges of the Inside of all the lower half of the Sternum. From thence the first Muscle on each Side runs up obliquely, and is fixed in the Cartilages of the second Rib. The second runs less obliquely to its Insertion in the Cartilage of the third Rib. The rest are inserted, in the same manner, in the Cartilages of the following Ribs; their Obliquity decreasing, and their Length increasing in Proportion as they are situated lower down; so that the lowest is almost transverse.

This last Muscle, which is fixed by one Extremity in the Cartilage of the sixth true Rib near the Bone, and seems to pass the *Appendix Ensisformis*, immediately above the Insertion of the Diaphragm in that Appendix, and to join the Muscle on the other Side. The superior Portions of the transverse Muscles of the Abdomen, united with the lowest *Sterno Costales* have nearly the same Appearance, so that these might be reckoned to belong to the *Transversales*, did not the Insertion of the Diaphragm come between them.

The Insertions and Direction of the *Sterno Costales* being carefully examined, it will be found that their Use is to depress the cartilaginous Portions, and anterior Extremities of the Ribs, especially the superior Ribs, except the first; and at the same time to draw the Cartilages of the inferior Ribs near the Sternum, by Reason of the Curvature. They may therefore very well be called *Depressores Costarum* as the *Supra Costales* are named *Levatores*. *Winslow's Anatomy.*

STERNO-HYOIDEUS, five *Sterno-Gleido-Hyoidæus*.

This is a long, thin, flat Muscle, broader at the lower than at the upper Part, and situated, together with its Fellow, on

the Foreside of the Throat, from whence some have very improperly termed it *Sterno Mastoidæus*.

It is fixed by its lower Extremity in the superior and lateral Part of the inner posterior Side of the Sternum, in the posterior Part of the sternal Extremity of the Clavicula, in the transverse Ligament which connects these two Bones, and in the inner or back-side of the Cartilage of the first Rib. All these other Insertions are more considerable than that in the Sternum, which is sometimes scarce perceivable.

From thence it runs upon the Foreside of the Aspera Arteria, joined to its Fellow by a Membrane, which forms a sort of *Linea alba*, and is inserted laterally in the lower Edge of the Basis of the *Os Hyoides*.

There is sometimes a transverse tendinous Line, about the Middle of the Backside of this Muscle.

The *Sterno-Hyoidæi* draw the *Os Hyoides* directly downward, and serve to counterbalance the different Motions of the *Stylo-Hyoidæi*, *Omo-Hyoidæi*, and *Genio-Hyoidæi*. They may in some Cases be assisted by the *Sterno-Thyroidæi* and *Thyro-Hyoidæi*. *Winslow's Anat.*

STERNO-MASTOIDÆUS. See MASTOIDÆUS ANTERIOR.

STERNO-THYROIDÆI. See LARYNX.

STERNUM. See THORAX.

STERNUTAMENTUM, signifies the same as STERNUTATIO; or as STERNUTATORIUM.

STERNUTATIO. Sternutation, or Sneezing. A Branch of the fifth Pair of Nerves united with those of the sixth Pair, is distributed in the Cavities of the Head, lined by the pituitary Membrane; and when any Part of this Nerve is irritated to a certain Degree, the Intercostal Nerve, and the *Par Vagus*, are drawn into consent, in such a Manner, that the Muscles subservient to Respiration, suffer a Kind of Convulsion, and the Air is expelled the Lungs with Violence, and acting upon all the Parts of the pituitary Membrane, absterges, and brings away the Mucus there secreted; and besides, this excites all the Actions which depends upon the Brain, sometimes to such a Degree as to become fatal, tho' often salutary when the Faculties are languid, or the Mucus indurated upon the pituitary Membrane, as it frequently happens after a Night's Rest. See CAPUT.

STERNUTATORIUM. A Sternutatory, or Medicine which excites Sneezing. Snuff is the most common Sternutatory; but any Thing which will stimulate the Nerves mentioned under STERNUTATIO, to a sufficient Degree, will excite Sneezing.

#### STERNUTATORIUM CUM EUPHORBIO.

*A Sternutatory with Euphorbium.*

Take Powder of Euphorbium. half a Scruple; white Wine an Ounce; Spirit of Scurvy-grass, two Drams; Oil of Marjoram, two Drops; shake all together.

This with the Euphorbium is too sharp and violent to be trusted therein to snuff up; and therefore 'tis best to dip a little Cotton, and just thrust it into the Nostrils. *Ludovici* is so timorous, as to order but half a Dram in half a Pint of Water, to be boiled and strained, and even then to be used but very sparingly.

#### STERNUTATORIUM CUM MARJORANA.

*A Sternutatory with Marjoram.*

Take of an Infusion of Marjoram made like Tea, one Ounce; dissolve in it Salt of Vitriol ten Grains, and put it in a Glass for Use.

This is directed and much recommended by *Ettmüller*, and it may be made stronger or weaker, by a greater or lesser Quantity of Water, as is found needful. But of all the Medicines to this Purpose the following is preferable.

#### STERNUTATORIUM CUM SALE VOLATILE OLEOSO.

*A Sternutatory with Sal Volatile.*

Take *Sal Volatile Oleosum*, two Drams; Spirit of Lavender, twenty Drops; Damask Rose-Water, or Orange Flower-Water, half an Ounce; mix.

This is both mild and grateful, and very refreshing to the Head, as well as a gentle Provoker of what is secreted by the Nose.

STER-



## STERNUTATORIUM CUM SUCCIS.

*A Sternutatory with Juices.*

Take Leaves of Honeyfuckle, four Handfuls; Primrose, three Handfuls; Betony, two Handfuls; Marjoram, one Handful; bruise them all together, and press out their Juice.

This is much milder than either that with Euphorbium or Turpeth Mineral, and may be used in any Disorders and Stoppages of the Head, either by snuffing a little out of the Hollow of the Hand, or blowing it up the Nostrils with a Quill, and these liquid Snuffs have this Advantage over Powder, that they do not clog up and heat the Nose.

## STERNUTATORIUM CUM TURPETHO MINERALI.

*A Sternutatory with Turpeth Mineral.*

Take Turpeth Mineral, half a Scruple; Powder of Liquorice, half a Dram; Nutmeg, one Scruple; Oil of Rosemary, two Drops; mix together.

This is very powerful in all such Illnesses of the Head as proceed from tough viscid Matter sticking upon the Glands and Sinuses, and have been of long Continuance, and obstinate; for it brings it away in such Plenty, that 'tis almost like a Salivation; but it is subject to make the Nose sore, and therefore the Nostrils should be rubbed sometimes with a little Oil of Almonds, or warm Milk.

STERTOR. A Snoring; or what the Vulgar call a Rattling in the Throat; a fatal Symptom in Apoplexies, and many other Distempers. See RHENCHOS.

STIÆ. *στιαι*. Sea PEBBLES. *Galen. Exeges.*

STIBI. *στιβι*. The same as STIBIUM.

STIBIALIA. Antimonial Medicines.

STIBIUM. Antimony. See ANTIMONIUM.

STICA, according to *Blancard*, are external Astringents, as Bole, and Dragons Blood.

STICHOS. *στιχος*. The Name of an Arteriacal, or pectoral Confection, the principal Ingredient in which is *Marrubium* Horehound, described by *Galen, Lib. 7. de Comp. M. S. Loc. C. 2.*

STICTICUM EMPLASTRUM. An Adhesive Plaister.

STIGMATA. The Marks of Blows, Bruises, Wounds, or Burns.

STILBOMA. *στίλβωμα*, from *στίλβω*, to shine, a general Term for any Cosmetic used to procure a shining Countenance. *Castellus.*

STILBUS. Antimony. *Rulandus.*

STILISCUS, the same as *Scalmus*, or *Priapiscus*. *Oribas. de Machin.* See PRIAPISCUS.

STILLA. A Drop.

STILLATICUS, the same as DISTILLATUS, distilled, an Epithet of Liquors passed through an Alembic. *Castellus.*

STILLICIDIUM has two Significations, one *pathologic*, in which Sense it is the same as STRANGURIA, which see; the other *pharmaceutic*, in which it signifies an Infillation of Liquor upon some Part of the Body, being much the same as *Embracation*. *Castellus.*

STIMMI. *στιμμι*. Antimony. *Dioscorides.*

STIMULANS. *στίμω*, stimulating, the same as pungent, pungent, is an Epithet applied to a Kind of Pain, *Galen in 6 Aph. 5.* The Words *stimulus* and *stimulus*, are, also, applied to some of the more active Kinds of Medicines, which are added to those which are slower, in order to quicken their Operation. *Castellus.*

STINCUS, as *Pachius* observes, *Not. in Myrsif. Antid. 69.* is a corrupt Word for *Scincus*, taken from a Manuscript Copy which has *σινγα*, *Scinga*, for *σινγα*, *Scinga*, which Corruption, he says, is still retained in the Shops to this very Day, where instead of *Scincus*, they say *Stincus*.

STIPATIO. The same as *Conflipatio*, or STREGNOSIS; which see.

STIPES. That Part of a Plant which is between the Root and the Branches, the Trunk, Stem or Stalk. *Blancard.*

STIPHIROS. *στιφίρος*. The same as STRYPHINOS; which see.

STIPTE, *Stipteria*, are corruptly read for *Stypte*, *Stypteria*. *Alum.* We meet also with *Stiptica* for *Styptica*. *Castellus.*

STIPULÆ, according to *Blancard*, are the Leaves which surround the Stalk in Corn.

STLENGIS. *στίλγος*. The same as STRIGIL or STRIGILIS, which see.

STOEBE. A Name for several Sorts of JACEA.

STOEBE *Plantaginis Folio.* See CATANANCE.

STOECHAS.

The Characters are;

The Galea is erect and bifid, the Beard trifid, and the Flower appears quinquefid. The Spikes of the Flowers are thick, squamated, and crowned at Top with small, coloured Leaves.

*Boerhaave* mentions three Sorts of *Stoechas*, which are;

1. *Stoechas*; purpurea. *C. B. P. 216. Tourn. Infl. 201. Boerh. Ind. A. 153. Stoechas Arabica*, *Offic. Stoechas Arabica vulgo diſta*, *J. B. 3. 277. Raii Hist. 1. 514. Stoechas vulgaris*, *Park. 67. Stoechas five Spica Hortulana*, *Ger. 469. Emac. 585. FRENCH LAVENDER.*

This beautiful Shrub grows three or four Foot high, clothed with long hoary Leaves less than those of common Lavender, two at a Joint, with smaller coming forth among them, the Stalks are square, bare of Leaves to the Top, on which grow thick, round scaly Spikes, or Heads of Purple, galeated Flowers; set in hairy Calyces. On the Top of the Spikes grow two or three slender Purple Leaves, the Seed is small and round, four succeeding each Flower; the Root is thick and woody, and much branched; the Leaves and Flowers have a strong aromatic Scent. It grows naturally in the southern Parts of *France* and in *Spain*. It took its Name, according to *Dioscorides*, from the *Strobiles* Island in the *Mediterranean* Sea, not far from *Marjilles*. It is planted with us in Gardens, where it is easily increased, and bears our severest Winters with moderate Shelter; and pity it is not more propagated, the fresh Heads being certainly of greater Virtue and Efficacy than those which comes from abroad, there being not fresh Importations in many Years. It flowers in *June*, and its Heads ought to be gathered when they are firm and hard, which is about the latter End of *July*. The Flowers are only used.

They are cordial and cephalic, strengthening the *Genus Nervosum*, and are useful for Apoplexies, Palsies, and all Kinds of Convulsions; they are opening and attenuating, promote the *Catamenia*, resist Poisons, and the Bites of venomous Creatures. They are an Ingredient in the *Theriaca* and *Mithridate*. *Miller's Bot. Off.*

*Stoechas* is absterging, attenuant and aperitive; its principal Uses are in Affections of the Head and Nerves, as the *Vertigo*, *Apoplexy*, *Palsy* and *Lethargy*. In Diseases of the Breast it has the same Effects as *Hyssop*; it also provokes Urine and the *Menses*, resists Poisons, and gives Relief under hypochondriac Disorders. Outwardly it is used in Lotions of the Head, Suffumigations, and other Ways. *Mesue* is very prolix in describing its Virtues; there are three Preparations of its Syrup in Use, the Simple, and Compound, and that of *Pernellius*. They are all esteemed cephalic, and used with good Success in cold Affections of the nervous Parts. *Mesue* writes that *Stoechas* purges Phlegm and Melancholy; but because it is slow and weak in Operation, he orders an Addition of a sixth Part of common Salt, *Sal Gemmae*, black Myrobalans, or *Cepula*. He also advises Persons of a bilious Constitution to abstain from it, for which Reason, perhaps, says *C. Hoffman*, it is grown out of Use. *Raii Hist. Plant. p. 514.*

2. *Stoechas*; folio verrato. *C. B. P. 216. Lavandula, foliis crenatis. T. 198.*

3. *Stoechas*; cauleculis non foliatis, *C. B. P. 216. Boerh. Ind. Alt. Plant. Vol. 1. p. 153.*

The first Species is called *Stoechas Arabica*, not because it grows in *Arabia*, but because of the high Commendations given it by the *Arabian* Physicians. *Stoechas* is somewhat of a ranker Quality than *Lavender*; in other respects it has the same Virtues, and is recommended for the same Diseases; hence a Syrup of *Stoechas* is so much commended by the *Arabian* Physicians, that they prescribe no cephalic Medicine in which this is not an Ingredient. But the common Preparations of this Syrup is good for nothing, because the Virtue is lost in the Boiling. The Conserve therefore, or the distilled Water, or only a simple Decoction, taken inwardly, are of excellent Virtue. Bruised, and the Juice expressed without Exhalation, there is no better Medicine for strengthening the Brain. The Plant has a very pleasant and fragrant Smell, and is anti-hysterical, attenuant, diaphoretic, detergent and inciding. Hence it is of Service in Obstructions of the *Menses*, Retention of Urine, Head ach and Melancholy, resolves coagulated Blood, but excites Catarrhs. It is reckoned of excellent Use for freeing the Lungs of acrimonious Humours, and kills Worms. Outwardly it is a very good Emollient in a Hardness of the Uterus, and to strengthen the Head in an Apoplexy. *Hist. Plant. ascripi Boerhaave.*

STOECHAS CITRINA. A Name for several Sorts of *HELEBORE*.

Besides the foregoing Species of *Stoechas*, *Dale* mentions the following.

1. *Mimosa*

2. *STOECHAS*



**STOECHAS CITRINA GERMANICA**, Offic. *Stoechas citrine Germanica latiore folio*. J. B. 3. 153. Raii Hist. 1. 281. *Elichrysum seu Stoechas citrina latifolia*, C. B. P. 264. Tourn. Inst. 453. *Amaranthus luteus latifolius*, Ger. Emac. 646. *Gnophaleum luteum*, Volck. 193. **GERMAN GOL-DY-LOCKS**.

It is cultivated in Gardens, and flowers in *May*. The Flowers, which are the Part used in Medicine, are of Service in Obstructions of the Liver and Spleen, and provoke Urine and the Menfes; they resolve coagulated Blood, dry up Rheums, and expel Worms.

*Tragus* says, that the Flowers of *Amarantus* (so he calls this Plant) are of a hot Nature, which is known by their Taste and Smell. Boiled in Wine and taken they expel Worms of the Belly, which *Tragus* says is verified by his own Experience. Taken in the same Manner, they provoke Sweat, and therefore he esteems them effectual in Obstructions of the Liver, Spleen, Kidneys and Bladder. A Lye made of the Flowers cures scald Heads, and kills Lice, and put among Clothes preserves them from Moths. The Decoction thereof in Water being used by Way of Vaporation or Fomentation, mollifies the Hardness and Swelling of the Matrix. Some use the Flowers, as *Breynius* says, with good Success in the Jaundice. *Raii Hist. Plant.*

**STOIBES**, *σείβης καρπός*, "the Fruit of the Stoebe," in *Galen, Exegeſis*, is expounded by *τὸ ἰππώφειον σπέρμα*, "the Seed of the Hippophaes." But *Foefius* thinks we should read *σειβῆς* and *ἰπποφείας*, and that they have a Relation to that Passage, *Lib. 2. περὶ γυναικ.* where a Cataplasim of the Seed of the *Stybe*, or the Bramble boiled in Water and Oil, is directed to be applied to the Breasts, in order to mollify their Asperities. But there we read *σειβῆς*, as *Galen* also in his *Exegeſis* says, that the *Hippophaes* is called also *σειβῆς*, *Stybus*. Now the *σειβῆς*, *Stoebe*, is an Herb fit for making green Beds or Banks on which to sit or repose, and may serve instead of Flocks to stuff Beds or Couches, and is called by some *Phleas*, according to *Pliny, Lib. 21. Cap. 15. from Theophrast. Hist. Plant. Lib. 6. Cap. 1. Helychius* writes *σειβῆς*, and expounds it by *ἴσδος χάρις*, "a Kind of Stubble." Some read in *Galen* *σειβῆς* for *σειβῆς*, and *σειβῆς* for *σειβῆς*. It is also written *σειβῆς*, *Lib. περὶ γυν. φύσ.*

**STOLIDES**, *στολίδες*. Wrinkles in the Forehead.

**STOLONES**. The Suckers of Plants.

**STOMACACE**, from *στόμα*, the Mouth, and *κακός*, Evil. A Symptom of the Scurvy, consisting in a Fætor of the Mouth, and an Erosion and spontaneous Hæmorrhage of the Gums.

**STOMACHICA**.

The Stomach has the leading Part both in Pleasure and Pain, for by its commodious Vicinity to the Heart it has the principal Share in contributing to the Strength of the Body, and by its sympathizing with the Soul, has a mighty Influence towards the Exaltation or Depression of the Spirits. From Pleasure proceed a good Concoction, a lively Colour, and fleshy Habit of the Body; from Pain or Uneasiness the contrary to these, and sometimes a Dejection of Mind, the Stomach receiving no Aliment, or Melancholy, with an Aversion to all Food.

A Disorder of this Part [the *Stomachica Passio*] is attended with a Hatred and Aversion to all Food, not only when it is offered, but when out of Sight; for the Patient recalls the Idea of it to Mind, accompanied with a Nausea, Anxiety, Redundance of Humidities, Cardialgia, an Effusion of the Saliva, and sometimes Vomiting: And tho' the Body suffers, and the Belly be empty, he bears the Pain of Fasting better than that of Eating; and if he finds it necessary to eat, he is forced to endure a Pain much worse than that of Hunger. It is very troublesome to him to chew his Meat, and much more irksome to swallow it; besides, he has an Aversion to common and wholesome Food, and longs for what is absurd and contrary to common Use. Nature with him is perverted, he is tired with every Thing, and hates and shuns his very Food. He is molested with a Pain between the Shoulders, which is increased after Eating and Deglutition, Restlessness, Anxiety, Dimness of Sight, Noise in the Ears, Heaviness of the Head, Numbness and Palsy of the Limbs, a Palpitation of the Hypochondria, and fancies that the Spine of his Back moves towards his Legs. Whether standing or lying, he seems to be agitated and moved this Way and that Way, like a Reed or a Tree by the Blasts of Winds. He spits a cold watery Phlegm, and if abounding with Bile in a bilious Constitution [*χολῇ ἢ πικρῇ χυλοισι*] is subject to a Scotomia. He is free from a Thirst, tho' after Eating he seems to desire Drink, continues waking tho' sluggish and drowsy, like those who labour under a Coma, is lean, pale, feeble, faint, spiritless, timid, silent, yet soon angry, very much molested with black Bile, and sometimes falls into Fits of Melancholy.

The Influence of these Symptoms being communicated by the Stomach to the Soul, a Disease must necessarily arise, but Men, through Ignorance of the sympathizing Parts, from whose Consent proceed the most severe and dangerous Disorders, ascribe the Cause of the Disease (merely) to the Stomach. What confirms my Assertion is the Contiguity of the Heart, the Original of all the Faculties; for the Heart is seated in the Midst between the Lungs, to the Middle of these is the Stomach connected, and this with the others to the Spine of the Back. From this Vicinity of the Heart proceed the Cardialgia, Fainting, and melancholy Disorders.

The Cause of this Disease, among a thousand others, is more especially a Discharge of Pus from the Belly upon the Stomach. This Disorder is also incident to those who through Necessity are forced to live on thin and hard Diet, and to such, also, as spend their Time in Study, and learned and laborious Researches, who are smitten with the Charms of divine Knowledge, and deprive themselves of due Rest and Food, neglecting the Care of themselves, and thinking nothing worthy of their Regard but a wise Saying, or a wise Action. These hard Students and Contemplators despise a Fulness and Variety of Meats, abstaining from Food and Sleep, and satisfying their Thirst with Water. Instead of a soft Bed, they lie on the Ground, without any Covering but the common Canopy of the Sky, and go muffled up in a thin and Threadbare Cloak, coveting no Riches nor Possessions but the invaluable Acquisition of divine Wisdom and Knowledge, which comprehends all that deserves to be called good in their Esteem. When they find it necessary to eat, they are contented with what is cheap and common, and use it not for the sake of satiating an Appetite, but for the Sustentation of Life. They indulge not themselves in drinking of Wine, or cheerful Conversation, in Tours or Promenades, but neglect the due Exercise as well as Clothing of the Body. Whither will not a Love of Learning divert a Person, and draw him aside? It seduces him from his Country, Parents, Brothers, and Sisters, and even from himself, and his own Life. Thus the poor Student becomes extenuated, looks ill-coloured, and old while young, is silent, thoughtful, never laughs, but is constantly severe and stern in his Behaviour. The Stomach is affected with Loathing, or is soon satiated with such cheap and ordinary Food as comes first to hand, being unaccustomed to Varieties, and of a dull Appetite to all Manner of Meats, and offended by any unusual Food, the taking of which is immediately succeeded by a general Loathing.

This Disorder of the Stomach is a chronic Affection, and different from a Phlegmon, Fluxes, Cardiogmus, and Pain of the Stomach.

The Stomachic Passion is most common in Summer, at which Season there is a Weakness of Digestion, Appetite, and all the Faculties. The Time of Life most subject to it is old Age, which, on account of its Vicinity to Death, is but too liable to a Failure of Appetite, even without a Disease. *Aræteus de Caus. & Sign. diutin. Morb. Lib. 2. Cap. 6.*

The *Stomachic Passion* takes its Name from the Part affected, the *Stomach*; but not every Disorder complained of in that Part is without further Consideration to be called the *Passion of the Stomach*, unless it be attended with the Concurrence and Continuance of many Symptoms together, and becomes of the Nature of chronic Distempers with repeated Exacerbations and Remissions. A Number of Physicians have prescribed singly for the Cure of this and that particular Symptom of the Disease, sometimes treating of the Hardness of the Stomach, sometimes of its Ventosity, of the Rheumatism in particular of the Stomach, and so of its Weakness, its Loathing and Aversion to Food, and the rest. *Themison*, in his first *Book of chronical Diseases*, calls a Solution of the Parts about the Stomach by the Name of *Rheumatism*. In his second Book he gives it the Appellation of *Ventosity*. *Theffalus* in his second *Book of Dietetics* treats distinctly of the Cure of a Solution, and of an Inflation of the Stomach. Our Design is to speak of them all under one general Head, in which we shall reduce *Ventosity* or Hardness from an Inflammation, under Diseases of *Stricture*, and a Loathing or Abhorrence of Food, and a *Corruption* of the same, a Disorder of an ambiguous Nature under the two principal Diseases.

The antecedent Causes of the *Stomachic Passion*, besides those which it has in common with other Distempers, are, more particularly a continual Indigestion or Vomiting after Eating, a taking Cold, Sorrow, also, and taking a strange and nauseous Draught of Physic.

The Symptoms attending this Disease in the Time of the Fit are, a Fainting, a cold Numbness of the Joints, or a Heat more piercing than the natural, diffusing itself through all the Members, and most sensible in the Palms of the Hands, with a dewy Sweat, a Restlessness, Jaclation, and Anxiety, a Lowness of Spirits, and Despondency of Mind, a Change of Colour,



Colour, a small, swift, and weak Pulse, a Wasting of the Body, or, on the contrary, an immoderate Appetite, with a Corruption of the Food, which acquires an acid, unfavoury or nidorous Quality. Sometimes the Patient lies speechless, and grinds or clenches his Teeth; there is always a Cold in the Head, with a Ringing in the Ears. Sometimes, also, there is an insatiable Thirst, and when the Inflammation is at the Height in the Time of the Fit, a Dryness of the Mouth, and a leaping under the Region of the Præcordia; there is, also, a Pain in the same Parts, or between the Scapulæ, which extends itself further, if the Inflammation happens to be more diffused, with a Difficulty of Deglutition, and a Strangulation, which has induced some leading Men of our Sentiments, in their Books of Epistles, to call this Kind of Symptom a *Stomachic Quinsy*.

A *Hardness* of the Stomach, without Heat or Pain, is attended with other common Symptoms, and besides with a ligneous Sensation of the same Parts, and especially between the Shoulders, if the Stomach be wholly dry'd. If there be only a Dryness of its upper Part, there will be a Difficulty of Deglutition till what is received arrives at the Bottom of the Stomach; or if the Dryness or Hardness affect its Bottom, which the *Greeks* call βάσις (*Basis*) Deglutition will be easy; but when it is perfected, will be succeeded by a Sense of Weight, with a Hardness, and a visible Tumor in the interior Parts of the Præcordia.

A *Ventosity* of the Stomach is attended by a Tension together with an Inflation. There is a Repletion of the Head, from a Retention of Flatusities, with continual Eructations, which manifests itself by a Sense of Heaviness of that Part, which is increased after taking Food, at which Time there is a Sound, also, of the Liquids in the interior Parts, as of a Bladder half full, the Wind rushing through the empty Spaces, till the Parts are relieved from this Tension, and relaxed by the Benefit of Eructations. If the Intestines be, also, inflated, there follows a Rumbling of their interior Parts, which the *Greeks* call βορβορυγμός (*Borborygmus*.) A *Solution* of the Stomach, which they call *Rheumatismus*, [a Rheumatism] is succeeded by a Flux of the Saliva, and sometimes by a continual Spitting, and a nauseous Humectation of the Mouth, with a biting Sensation in the inward Parts. Some, in this Circumstance, vomit up vast Quantities of a gross, tenacious, or a bilious and porraceous Humor, or some other Substance of the same Colours. If the *Solution* be occult, which the *Greeks* call ἀδελος (*Adelos*) or the Signs are not apparent, which the *Greeks* call λογοθεωρησις (*Logothœoretia*) there follows a Weakness of the Pulse, with a Sense of Trembling and Pendulousness of the Stomach, a Faintness and Swooning, which the *Greeks* call λιποθυμία (*Lipothymia*). This Symptom is removed for the present by taking some Food, and the Patient finds himself refreshed, though but for a while, for he relapses into his former Fainting-Fit, and is in the same Circumstances as in the last Paroxysm; so that unless he receives speedy Recruits of Aliment he falls away as dead. Hence we are told by the Antients, that Numbers under this Disorder have continued eating and drinking for a whole Day and Night without ceasing. And *Aclepiades* relates, that a Servant of *Praxagoras* eat every Day three Loaves, each of two Pounds in Weight, and after he had eaten them was no otherwise affected than if he had taken nothing. And this last Character distinguishes the fore-mentioned Disorder from a *Phagedæna*; for in this latter the Food received is not digested, nor continues in the Stomach, but is expelled thence by Vomiting. *Cælius Aurelianus Morb. Chron. Lib. 3. Cap. 2.*

#### THE CURE.

In other Diseases, after the Cure, there remains nothing to confirm the Health and strengthen the Body, but a proper Regimen with a good Concoction. To *Stomachic* Patients alone a Regimen proves of no Service, or prejudicial, for want of rightly digesting his Aliments. I shall, therefore, briefly give Directions in using proper Means for promoting a due Concoction in such Subjects. For Gestation, Walking, with other Exercises of the Body and of the Voice, may procure an Appetite, and subdue a Loathing or Inappetence of the Stomach, but prove insufficient to remove a long and habitual Indigestion, and to render a lean and extenuated Body carnos, and of a good Habit. The Sick in such Cases are more to be indulg'd than other Patients, and to be managed in the nicest Manner: The Physician, also, is to comply with their Desires, provided they extend not to something which would prove very prejudicial to them; for this is the best Way you can take, if they cannot be

persuaded into a Liking of what would be most proper and beneficial.

Medicines to be taken inwardly are the Juice of Wormwood, Unguentum Nardinum, Theriaca, the Seeds of Parsley, Ginger, Pepper, and Sefeli; these promote Concoction. Outwardly, to the Sternum may be apply'd an astringent Epithem, compos'd of Nard, Mastich, Aloes, Acacia, and Juice of Quinces. Another of the like Nature may be prepared of the Pulp of Apples bruised with Dates. Besides these Remedies, others may be used, which I have prescribed for the Cure of a Thirst in a Diabetes. The same Remedies, indeed, which are proper in this Disorder, would excite a Thirst in a Diabetes; but in Stomachics, the Tone of the Stomach is not at all disposed to render the Patient thirsty. *Aræteus de Curat. Chron. Morb. Lib. 2. Cap. 6.*

#### STOMACHICA.

*Stomachic Corroboratives*, or such as strengthen the Tone of the Stomach and Intestines, among which are *Carminatives*, as the Roots of Galangals, red Gentian, Zedoary, Pimpinella, Calamus Aromaticus, and Arum; Of Barks and Rinds, those of Canella Alba, Sassafras, Citrons, *Szeville* and *China* Oranges, the Cortex Africanus, the Cortex Winteranus, Cascarilla; Of Spices, Pepper, Ginger, Cloves, Cinnamon, Cardamums and Mace. Other Things of this Nature are, among Simples, as *Roman* and common Chamomile, Wormwood, Mint, Carduus Benedictus, and the four Carminative Seeds; Of Preparations, the Oil of Cedar, Oil of Oranges by Expression, Oils of common Chamomile, Daucus Creticus, Anisum Stellatum, Cumin, Caraway, Mint and Wormwood, with the Spirit of Salt and sweet Nitre. Among Compounds are the Sal Volatile *Sylvii*, our stomachic Elixir, and that of *Michaeli*, the carminative Essence of *Wedelius*, the stomachic Powder of *Birkmannus*, the Essence of Orange-Peel, with sweet Spirit of Nitre, Tincture of Tartar, Oils of Oranges prepared by Expression, the compound Essence of Wormwood of *Conordingius*, the carminative Water of *Dornerellius*, and the Spiritus de Tribus.

Though many cephalic and nervine Remedies are, also, of excellent Service in Diseases of the Stomach and Intestines, especially such as proceed from a Weakness or Decay of their Tone, there are yet other Medicines which, with Regard to the particular Kind of Disorder, are accommodated, as it were, by a specific Virtue to the Distempers of those Parts. Thus, for Example, under a Weakness of Appetite, from a Congestion of viscid and acid Crudities in the Stomach, besides Bitters, such as the Root of red Gentian, the Herbs Wormwood, and Carduus Benedictus, and the several Sorts of Spices; the Roots, also, of Galangal and Pimpinella, the Canella Alba, Pepper, Ginger, and Arum, are of especial Service. For a Nausea, Vomiting and Inversion of the Stomach, the most present and effectual Remedies are Mint, its spirituous Water, and Oil carefully distilled; Mastich, and its Spirit, with what is prepared of *Peruvian* Balsam and Salt of Tartar, and our mineral anodyne Liquor. Against the Cardialgia, Colic, and Gripes, the speediest and best adapted Remedies are fresh Orange Peel, and the Essence of the same duly extracted, the Water and Oil of *Ethiopian* Cumin, the genuine Oil of the Flower of common Chamomile, with the sweet Spirit of Nitre. To correct an excessive Lubricity of the Intestines, and restrain a Looseness, the Cascarilla is endu'd with a peculiar Virtue. Under Inflation of the Intestines, the most effectual Medicines to expel the Flatuses are the carminative Water of *Dornerellius*, the carminative Essence of *Wedelius*, the Spiritus de Tribus incorporated with the sweet Spirit of Nitre, the Essence and Water of Zedoary, and Cardamoms, with the genuine Oils of Caraway and Cumin. *Frederic Hoffman.*

*STOMACHOTROTOS*, from στόμαχος, the Stomach, and τρωσχω, to wound, wounded in the Stomach.

*STOMACHUS*, στόμαχος, has many and various Significations with the antient Physicians. Properly, it signifies a narrow Neck like an Isthmus placed before any considerable Cavity resembling a Belly; and this was what the Antients meant by the Word. The Name was afterwards translated to signify the *Oesophagus*, or *Gula*, the Gullet; and since that, to denote the Mouth of the Stomach, which the Antients call καρδιά (*Cardia*). This last Sense was impos'd upon the Word in *Galen's* Time, as he informs us in the Beginning of his fourth Book *de Usu Partium*. The same Author, *Lib. 5. de Loc. Aff. Cap. 5.* tells us, that Writers since the Time of *Aristotle* usually give the Name of *Stomachus* to the Part between the Fauces and the Mouth of the Stomach, which the Antients called *Oesophagus*, and those in his Time, *Gula*, "the Gullet;" but that *Aristotle* always called this Part by its antient Name. Thus *Tully*



*Tully, Lib. 1. de Nat. Deorum*, makes the *Stomachus* adhere to the Roots of the Tongue, whither the Food is first transmitted from the Mouth, with the Assistance of the Motion and Agitation of the Tongue, and through which it is impelled downwards. *Celsus*, also, *Lib. 4. Cap. 1. et 3.* takes the *Stomachus* for the *Gula*, when he says, that it is situated under the Fauces, and receives the Food; though the same Author seems to use the Word improperly for the lower Part of the Stomach, when he makes the *Stomachus* the Beginning of the Intestines, and describes it as a nervous Part beginning from the seventh Vertebra of the Spine, and join'd to the Stomach about the Præcordia. *Lib. 4. Cap. 1.* And *Pliny Lib. 11. Cap. 37.* calls the upper Part of the *Gula*, or Gullet, the *Fauces*, and the other Part the *Stomachus*, which Appellation, also, was not unknown to the Antients, as appears from *Homer. Il. 7. vers. 292.* ἡ ἀπὸ στομάχου ἀνῶν τῶν κνέει χαλκῶ. "And cut the Throats (*Stomachi*) of the "Lambs, &c." To proceed, *Galen* in many Places writes, that *Stomachus* was a Name for the Mouth of the Stomach; and *Lib. 4. Cap. 5. de Loc. Affect.* he says, that the Antients call'd the Mouth of the Stomach καρδιά; the Appellation being given it from some Symptoms which it seemed to induce; but in his Time it was call'd *Stomachus*, by a wrong Use of the Word, as he writes, *Com. ad 7 Aph. 56.* where he says, that in his Time not only the common People but the most eminent Physicians call the Mouth of the Stomach, by an Abuse of the Word, *Stomachus*. To the same Purpose he writes in many other Places, and particularly *Lib. 2. τῶν κατὰ τὸν.* he says, that *Stomachus* is the Name by which *Archigenes* calls the Mouth of the Stomach, and is the usual Appellation bestow'd on it by the Physicians, who use the Phrase *Stomachicæ Syncope* (to signify a Syncope proceeding from an Affection of that Part) and call some *Stomachici* from a Disorder in that Part, and particularly those who have an Oppression at the Mouth of the Stomach, as he writes in the Beginning of *Lib. 8. κατὰ τὸν.*

*Hippocrates, Lib. π. ἀκακίαις,* and *Lib. περὶ καρδίας,* calls the *Oesophagus*, or *Gula*, στόμαχος, which was the usual Name the Antients had for it. *Stomachus* was, also, us'd among the *Latins* to signify the same as *Gula*, or the Canal subjacent to the *Fauces* at the Root of the Tongue, which transmitted the Meat and Drink to the Stomach, as we are assured by *Gellius, Lib. 17. Cap. 11.* Thus, according to the Opinion of *Erastistratus*, στόμαχος κοιλίης, in *Hippocrates*, will signify that narrow Pipe, or Neck of the Stomach prefix'd to its Cavity, from that antient and proper Signification of στόμαχος, observ'd in the Beginning, in which Sense it is very often used by *Hippocrates*. For Instance, στόμαχος οὐτῆρος, is expounded in *Erotian* to be the Neck of the Bladder, and τὴς μήτρας στόμαχος, the Neck of the Womb.

**STOMARGUS.** στόμαργος. *Galen*, in his *Exegesis*, writes, that *Diogenides* reads σωμα γυ in the second of the *Epideemics*, and understands it τὸ λαλῶντος μακρῶς, of one who talks madly. Others, he says, read σωμαργον, and make it a proper Name.

**STOMATICA.** σωματικά, from στόμα, the Mouth. Remedies for Disorders of the Mouth, and *Fauces*.

**STOMOMA.** σωμαμα. Purified Iron, that is, Steel.

**STOMOMANICON.** σωμαμανικόν. A Name for the Mutele call'd otherwise *Platysma Myoides*.

**STOPAROLA.** The Name of a small Bird mention'd by *Aldrovandus*.

**STORAN.** See **STYRAX**.

**STORYNE.** στυν. An Instrument us'd by the Antients for drawing Blood from the Nose, as we learn from *Aræteus, de Catat. Diuturn. Morb. L. 1. C. 1.* As this Author but just mentions it, and I don't know that it is taken Notice of by any other, I cannot describe it.

**STRABISMUS, STRABILISMUS, or STRABOSITAS.** A Distortion of the Eye, or squinting. See **Oculus**.

**STRAMONIUM.**

The Characters are;

The Root is annual; the Leaves are alternate, and sinuated at the Edges; the Calyx is pentagonal, and tubulated. The Flower is monopetalous, Funnel-shaped, quinquefid, and open. The Ovary in the Bottom of the Calyx becomes a prickly, roundish Fruit, divided by a decussated, or cruciform Partition, into four Cells, containing many Kidney-shaped Seeds.

*Boerhaave* mentions six Sorts of *Stramonium*, which are;

1. *Stramonium*; fructu spinoso, rotundo; flore albo simpliciter. *T. 118. Solanum, Pomo-spinoso, rotundo, longo flore.* *C. B. P. 168. Datura Turcanum.* *H. Eyss. Aut. O. 2. F. 12. F. 1.*

2. *Stramonium*; fructu spinoso, oblongo; caule, & flore, violaceo. *Boerb. Ind. A. 261. Stramonium, Offic. Stramonium majus album, Park. Parad. 360. Raii Hist. 1. 748. Stramonium spinosum, Ger. 277. Emac. 348. Stramonica fructu spinoso oblongo flore albo. Tourn. Inst. 119. Stramonium altera major, sive Tatura quibusdam, J. B. 3. 624. Solanum fœtidum poma spinoso, oblongo, C. B. P. 168. THORN APPLE.*

The common Thorn-Apple has a white, thick, woody Root, pretty much branched, and full of Fibres, from which arises a thick, round, hollow Stalk, two or three Foot high, divided at the Top into several Branches, and cloathed with large Leaves, waved and sinuated about the Edges, in Shape like the common Night-shade, but much larger, of an ugly fœtid Smell. The Flowers are long, white, hollow Tubes, dilated at the Ends into large pentangular Brims, each Angle ending in a long Ligula: They stand in loose, green, five-cornered Calyces, and are succeeded by large Seed-Vessels, near as big as a Walnut, covered all over with long, thick, upright Thorns; and as they ripen, they separate into four Parts, shewing the flat, black, and somewhat rough Seed. It is sown in Gardens, and is sometimes found wild among Rubbish, and flowers in July.

The Leaves are accounted cooling, and good for Burns, Scalds, and Inflammations in any Part. The Seed is narcotic and soporiferous, and rarely used. *Müller's Bot. Off.*

3. *Stramonium ferox.* *Boerb. Ind. 261. Tourn. Inst. 119: Datura, Offic. Solanum fœtidum Pomo grandiore Aculeis donato, Raii Hist. 1. 748. DUTROY.*

The Seed of *Stramonium* pulveriz'd and drank disorders the Senses, and induces a Delirium, which lasts twenty-four Hours, whence, as we are told by *Garcias*, it is us'd by Thieves to mix with the Food of those whom they design to rob. And *Acosta* tells us, that it is customary with lewd Women to give half an Ounce of the Powder to their Gallants, in Wine, or any other Liquor they like best. He who is so unfortunate as to take it remains for a long Time like one without Reason, either laughing, weeping, or sleeping, and sometimes talking, and giving rational Answers as if he were in his right Senses, though the contrary be true, for he neither knows whom he talks with, nor remembers a Word of what has been said after he comes to himself. Some of these Women are so experienc'd in administering this Medicine, and know how to temper it in such a Manner, that its Effects shall last for a certain Time, or for as many Hours as they please. There are some Physicians among the Pagans, who use the Seed to provoke Urine; their Method is first to exhibit some Emetic, then inject an acrimonious Clyster, and apply strong Ligatures to the Arms and Legs, and rub them very well, and sometimes to apply Cupping-Glasses to them: If these have no Effect, they find it necessary to open a Vein in the great Toe.

As the Pagan Physicians, as well as the Christian Natives, abhor the Use of Venesection and Cupping-Glasses, they do nothing but provoke Vomiting, and apply strong Ligatures and Frictions. If these will not answer the Intention, they prescribe a Bath of warm Water to provoke Sweat. After vomiting they exhibit a Draught of Wine mixed with Pepper and Cinnamon. A Dram of the Root taken in Wine induces a profound Sleep and strange Dreams full of surprizing and extravagant Images. The Seeds macerated a Night in Vinegar, then carefully powder'd, are good to anoint a miliary Herpes, and spreading Erysipelas. An Ointment prepared of the Juice of the Leaves with Swines Fat is a most approved Remedy for a Burn by Fire or scalding Water. *Raii Hist. Plant.*

4. *Stramonium*; fructu spinoso, rotundo; flore violaceo, duplici, triplicive. *T. 119.*

5. *Stramonium*; Americanum; minus; Alkekengifolio.

6. *Stramonium*; folio Hyoscyami; flore toto candido; fructu propendente, rotundo, spinis innexis ornato. *Datura, folio Hyoscyami latissimo, flore toto candido, fructu propendente, rotundo, copiosissimis, & longissimis, spinis, fere innexis, munito, semine pallido.* *H. Mauroc. Boerb. Ind. Alt. Plant.*

The Leaves, Roots, Flowers, and Seeds of *Stramonium* taken inwardly, induce a Sapor, it used in great Quantity. The very Smell thereof causes Ebriety. A large Dose destroys the Memory of all things past. The Whores in *Yara* use it when they are hir'd by People of Quality; the Women, also, give it to their Husbands, who become delirious afterwards; they will, also, take it themselves in the Presence of their Husbands out of Wantonness. Too large a Dose induces Stupidity, Faintness, and at last Death. The Plant induces a strange Kind of Madness, or Drunkenness: They who take it, make Answers with their Eyes open, but remember nothing, nor concern themselves in the least about any



any thing. For this Reason the *Indian Princes* make use of it to render their Rivals stupid, and consequently incapable of Government, in which Condition they suffer them to live and shew themselves to the People. These Effects are caused by the Drink called *Datyra*, which is composed of Opium, Stramonium, and Hyoscyamus. This Drink has no Taste nor Smell, yet the Diseases proceeding from it are incurable. *Garcias*, indeed, speaks of a Remedy, which is immediately to take a Vomit with a large Quantity of Salt and Vinegar; this in some measure cures, but they never recover their Strength of Brain. See *Bernier's Travels thro' the Dominions of the Great Mogul*. This Plant taken in a small Quantity causes Sleepiness, in a large Dose Madness, Convulsions, cold Sweats, and at last Death. Outwardly, in the Form of a Cataplasm, it is of Service in an Erysipelas, Convulsions, inveterate Ulcers, and all kinds of Inflammations, but is never to be used internally. *Hist. Plant. Ascript. Boerhaave.*

**STRANGALIDES.** *στραγγαλίδες*. Hard Tumors in the Breasts from concremented Milk.

**STRANGULATIO.** Strangulation; a Sensation of Suffocation in hysteric Disorders.

**STRANGURIA.** *στραγγυρία*, from *στράγγω*, a Drop, and *ούρον*, Urine. A Strangury; that is, a Discharge of Urine by Drops, attended with Pain. See **CALCULUS**, **CATHETER**, **CATHETERISMUS**, **GONORRHÆA**, and **RENES**.

**STRATIFICATIO.** Stratification; that is, the laying different Substances upon each other; *Stratum super stratum*; Layer upon Layer.

**STRATIOTES**, Offic. *Stratiotes Ægyptia*, J. B. 3. 787. Raii Hist. 2. 1384. *Stratiotes aquatica vera Dioscoridis & Ægyptiaca*, Park. Theat. 1249. *Lenticula palustris Ægyptiaca*, five *Stratiotes aquatica folii sedo majore latioribus*, C. B. P. 362. *Hay alem el maoui*, id est, *Stratiotes*, Alpin. Ægypt. 2. 51. **WATER SEA-GREEN.**

It grows in the Canals derived from the Nile near *Damiata* in *Egypt*, and swims on the Water like the *Lenticula Palustris*; has no Stalk, but has Leaves resembling those of the *Cynoglossum*, somewhat short, broad, thick, hard, hairy and whitish; to these Leaves, instead of Roots, hangs a little thin Sort of Down. From its Resemblance to the greater *Sedum* or Sea-green, they call it *Hay alem el maoui*, that is, *Water-Sea-green*. It has no Smell but what it has from the Water, but has a dry and astringent Taste like *Acacia*, and is found by Experience to be good for the same Diseases as Plantain. Hence the Countrywomen, whom they call *Bedovi*, use the Decoction or Juice, or take a Dram of the Powder every Day, to stop an Hæmorrhage of the Uterus; and the Peasants apply the bruised Leaves to Wounds, with surprising Success. I suppose this to be the true *Stratiotes* of the Ancients, of which *Dioscorides* gives the following Description: "The *Stratiotes*, which grows upon the Water, and which some call the *River Stratiotes*, the *Egyptians* thus, the *Magi* the Blood of *Ælarus*, swims upon the Waters, and lives without a Root, whence it has its Name. It is like the *Sempervivum*, only has a larger Leaf." That Author ascribes to it the same Virtues for which the *Egyptians* now use it; so that there can be no doubt but this is the true *Stratiotes*. The same is more clearly demonstrated by *Pliny*, in the following Words: "The *Stratiotes* is a Plant in much Esteem among the *Greeks*, but it grows only in *Egypt* among the Inundations, being like the *Aizoon*, only its Leaves larger." *Prosper Alpinus, de Plant. Egypt.*

**STRATIOTICON.** *στρατιωτικόν*, or **STRATIOTÆ COLLYRIUM**. The Name of a Collyrium described by *Scribonius Largus*, No. 33. and *Paulus Ægineta*, L. 3. C. 22.

**STRATUM SUPER STRATUM.** See **STRATIFICATIO**.

**STREMMMA.** *στρίμμα*, from *στρίφο*, to turn. A Strain, or, as it is usually called, a Sprain, of the nervous and membranous Parts about a Joint.

**STREPITOSUS.** The Name of a flatulent Disorder common in those Parts of the Alps which belong to the House of *Austria*, in which the Face, Neck, and Arms, are so distended with Flatulences, as to make a Noise, when struck, like a dry Bladder half distended with Wind. *Castellus* from *P. de Sorbait. Med. Septentr.*

**STRIATA CORPORA.** Two Protuberances of the Brain, upon the *Crura* of the *Medulla Oblongata*. See **CEREBRUM**.

**STRIBILIGO.** A cutaneous Efflorescence. *Helmont. Tumul. Pessis.*

**STRICTOR.** The same as Sphincter.

**STRICTUM**, in *Scribonius Largus*, No. 45. is Dense.

**STRICTURA.** Stricture, Rigidity. I have made several References to this Article in the Course of this Work, at that Time intending to explain the Doctrine of Disease

from Stricture or Rigidity here; but as I afterwards judged it more proper to be inserted under the Article **FIBRA**, the Reader must have the Trouble of consulting that. See, also, in the Preface, the Methodic System.

**STRSDOR DENTSUM.** A Grinding of the Teeth.

*Prosper Alpinus*, in his Treatise *de Præfag. Vit. et Mort. Ægror.* tells us, that a *Stridor Dentium*, which he calls a Convulsion of the Teeth, has been frequently observed by him to be a mortal Symptom; and he confirms his Observation by the Authority of *Hippocrates*, 1 *Prorrhet.* 48. and in the Book of the *Prognostics*, where it is said, that "the Grinding of the Teeth in Fevers, where a Person has not been accustomed to do the same from his Childhood, portend Madness and Death; and if it be attended with a Delirium, is so much the more dangerous and fatal." And *Galen* commenting thereon says, "That a Grinding of the Teeth, when the Patient has not been used to it from the Beginning, indicates an approaching Delirium; but if you perceive the Patient to labour under both Symptoms, that is, to grind his Teeth, and to be under a Delirium, you may conclude him to be near Death." We read the same Prognostics from a *Stridor Dentium*, 1 *Prorrhet.* 48. And we have it confirmed by an Instance which *Hippocrates* gives us, 7 *Epid. T.* 20. in the Person who lay sick in the House of *Metron*, who, the Day before he died, was affected with this Contrition or Grinding of the Teeth, among other mortal Symptoms. We may conclude, therefore, that a *Stridor Dentium*, in acute Diseases, portends nothing but Death. *Prosper Alpinus.*

**STRIGENSIS TERRA.** See **TERRA SILESIACA**.

**STRIGIL**, **STRIGILIS**, was an Instrument in Use among the Ancients in their Baths and some gymnastic Exercises, and served to absterge Sweat and Sordes from the Body. Persons who intended to bathe or use some Exercise, when they came into the Gymnasium, put off their Clothes in the Apodyterium [see the Article]; after which some of them, especially such as designed to box or wrestle, went into the *Alipterium*, where they were anointed, and thence proceeded to the Place where the Dust was, with which they were sprinkled as they passed along, and then entered on their several Exercises; which being finished, they returned to the *Alipterium*, and had the Strigments and Sordes absterged from their Bodies by the *Aliptæ* [see the Article] with Iron *Strigili*; and as they consisted of a Mixture of Oil, Dust and Sweat, they were preserved for medicinal Uses, and called by the *Attics* *Comfalus*, *κόμισαλος*, and by others *Patos*, *πατος*, as appears from *Dioscorides*, *Pliny*, *Galen*, and *Aetius*; tho' *Avicenna*, in his second Book, mentions the dry Sweat of Wrestlers, which I suppose to be such as had no Mixture of Oil or Dust. And tho' *Strigils* were used in Bathing in *Galen's* Time, they were generally Sponges, or made of Linnen, and not always common, but every one carried with him his own *Strigil*, especially those who had an Aversion to Instruments which were of common Use. *Strigils* were of Iron, Gold, Silver, Horn, Ivory or Brass, and were of a crooked Shape, like a Gardiner's Pruning Knife, as appears from ancient Monuments, and that Verse of *Martial*.

*Pergamus hoc misit curvo diffringere Ferro.*

**STRIGMENTUM**, *γλαίς*, *ξύπος*, the Strigments, Filth, or Sordes, absterged from the Skin in Baths, and Places of public Exercises, or from the Walls or Statues belonging to those public Places. Hence *Strigments* are of three Kinds, first of the Baths, consisting of the Sweat, Oil, and Sordes collected in those Places; secondly, of the *Palestra*, consisting of the same Things, with an Addition of Dust, collected partly by Insersion after anointing with Oil, and partly in the Colluctation of the Combatants offensively, and insidiously throwing Dust upon each other, besides what was raised by Conflicting. The third Kind was obtained by Abrasion from the Walls and Statues belonging to the *Gymnasium*; and these Strigments, or Sordes, consisted in a great measure of Oil, (the same with which the Combatants were anointed) with a Mixture of Particles of that particular Substance to which it adhered, and consequently some Communication of its Virtues; as, for instance, what was scraped off from Copper Statues had a Mixture of the Substance and Virtues of *Ærugo*.

*Archigenes* in *Galen*, Lib. 3. *κατὰ τὸν*, uses Strigments with Lime for discharging the Parotides; and uses, also, for the same Purpose an Application of Nitre, with a third Part of *Rubrica Sinopica*, and with *Unguentum Cyprinum*, reduced to a strigmentitious Consistence.

Strigments absterged in the Baths are of a heating, mollifying, and discutient Quality; and therefore proper to anoint the *Rhagades* and *Condylomata* affecting the Anus.



The Strigmentitious Sordes of the *Palæstra*, which have a Mixture of Dust, discuss Collections of Matter about the Joints; and, being applied hot by way of Fomentation, or in a Malagma, give Relief under the Pain of the Sciatica.

The Strigments which are scraped off from the Walls and Statues belonging to the *Gymnasia* [public Places of Exercise] are heating, and discuss Tumors which are difficult of Maturation, and are proper for Abrasions, and Ulcers in old Persons. *Dioscorides, Lib. 2. Cap. 34, 35, 36.*

STRINGENS. Astringent.

STRIX. The Screech-Owl, a Bird described by *Aldrovand.*

This nocturnal Bird is a Species of Owl, and as large as an ordinary Hen. It lives in mountainous and maritime Places, near the Folds in which the Goats are kept, because it is fond of their Milk, and sucks them when it can have any Opportunity of doing so. It contains a large Quantity of volatile Salt and Oil. Its Flesh, when dried and reduced to a Powder, is proper for the Cure of Palsies and Quinsies. The Dose is from half a Dram to one Dram. Its Fat, when externally applied, is emollient, resolvent, and proper for corroborating the Nerves. Its Gall is deterfive, and proper for removing Specks of the Eyes. *Lemery des Drogues.*

STROBILE. στρεβίλη, from στρίφω, to turn. An intort-ed Pledget of Linnen.

STROBILITES. στρεβιλίτης. An Epithet for Wine impregnated with Pine-Cones. *Dioscorides, L. 5. C. 44.*

STROBILUS. στρόβιλος. An Artichoke. But *Strobilus*, also, signifies a Pine-Cone; and in *Dioscorides*, as *Marcellus Tiro* renders him, a Pine-Kernel.

Pine-Kernels cleansed and eaten, or taken in *Passum* with Cucumber-Seeds, provoke Urine, and correct the Acrimony of Humours infesting the Kidneys and Bladder. They, also, give Relief under the gnawing Pains of the Stomach, being taken in the Juice of Purslain; they strengthen a weak Body, and correct the corrupted Humours. The whole *Strobili*, or Pine-Cones, gathered fresh from the Tree, then bruised and boiled in *Pallum*, are three Cyathi of the Liquor, if taken every Day, are good for inveterate Coughs, and a Phthisis. *Dioscorides, Lib. 1. Cap. 88.*

STROMBITES. A Stone in Form of that sort of Shell-Fish, called *Strombos*.

STROMBOS. στρεμβός. A Periwinkle, or any Species of tubinated Shell-fish, from στρίφω, to turn.

STROPHOI. στρόφοι. Gripes of the Intestines.

STRUMA. See SCROPHULA.

STRUTHIO. Offic. Schrod. 5. 323. Charlt. Exer. 79. *Struthio-Camelus*, Will. Ornith. 100. Raii Ornith. 144. Ejsld. Synop. A. 36. Schw. A. 350. Aldrov. Ornith. 1. 587. Gesn. de Avib. 670. Jonf. de Avib. 35. Bellon. des Oyse, 232. THE OSTRICH.

The Parts of this Animal used in Medicine are the *Coat of the Crow*, the *Fat*, and the *Eggs*. The *inner Coat of the Crow* corroborates the Stomach, and dissolves Stones in a surprising manner. The *Fat* is agreeable to the nervous Parts, mollifies the Hardness of the Spleen, and mitigates nephritic Pains, the Parts being anointed therewith. The *Eggs* burnt and triturated in Vinegar cure the Impetigo.

STRUTHIO-CAMELUS. The same with the preceding. It is also called *AERA*.

STRUTHIOFERA. A Species of *Filix*, so called because its Leaves resemble the *STRUTHIO*.

STRUTHIOMELA, STRUTHIA. A small Species of Quinces, more odoriferous, and of a sweeter and less astringent Juice than the common sort. *Plin. Lib. 15. Cap. 11. Oribas. Med. Col. Lib. 2. Cap. 50.*

STRYCHNODENDRON. Raii. A Name for the *Solanum fruticosum bacciferum*.

STRYCHINOS, STRYCHNON, στρύχνος, στρυχνον, in *Dioscorides*, is the *Solanum*.

STRYPHNOS. στρυφνός. The same as *ACERBUS*, which see.

STULTITIA. μωρία. See MOROSIS.

STUPEFACIENS. See NARCOTICA.

STUPHA. The same as *Balneum Laconicum*, or a Vapor-Bath. See BALNEUM.

STUPPIO. Stannum, or Tin. *Rulandus.*

STUPOR. νάρκη, νάρκωσις. A Stupor, or Numbness.

STUPOR DENTIUM. An Affection of the Teeth; for which see DENTIS.

STUPPA, STUPA. A Stupe, in Surgery, is a Piece of Cloth dipt in some proper Liquor, and applied to an affected Part. *Blancard.* Or, as *Castellus* describes it, it is a Linnen or Hempen Bag used by the Surgeons in stopping a Cavity, and, also, in Epithems to the Forehead, Nucha, and other Parts, and in Fractures.

STURIO, Offic. Schrod. 5. 333. Aldrov. de Pisc. 517. Bellon. de Aquat. 101. Gesn. de Aquat. 931. Jonf. de Pisc. 75. Raii Ichth. 239. Ejsld. Synop. Pisc. 112. *Acipenser*, *Randol. de Pisc. 1. 410.* Charlt. de Pisc. 34. *Acipenser*, five

*Sturio*, Schonf. Ichth. 9. *Acipenser*, *Sturio*, Mer. Pin. 188. *Sturio*, five *Sturui*, Sale de Aquat. 113. THE STUR-GEON.

It is a Native of the Sea, but for the most part an Inhabitant of Rivers. The Parts in Use are the *Bones* and the *Caviar*, which is a Mass resembling green *Hamburg Soap*, both in Colour and Substance, and is exported in great Quantities from *Russia* to *Italy* and other Countries. The Way of preparing it is thus related by *Gesner*: They take the Eggs of the Sturgeon, and first cleansing them from the Nerves which are therein, wash them in Vinegar or White Wine, and spread them upon a Table to dry. This done, they put them into a Vessel, and cover them with Salt, then break them abroad with the Hand, not using an Instrument, and afterwards put them into a Bag of a rare Texture, that the Humor may run through. When this is done they put it into a Pot with a Hole in the Bottom, by which the remaining Humor, if any, may be evacuated, and after well pressing and covering it close, set it aside for Use.

The *Bones* are commended in the wandering Gout, and are exhibited in the Pain of the Colic. The *Caviar* is nourishing, increases the Semen, and excites Lust. *Dale.*

Sturgeon is a large Fish that lives both in the Sea and fresh Water; it has an excellent Taste, and grows fat in the Rivers, and more delicious than if it had continued always in the Sea; it usually weighs a hundred Pounds, but sometimes double. This Fish is able to strike a Man down with its Tail, and it will frequently break the Nets in which it is taken. In Ponds they cannot live long; and as it has no Teeth, it cannot feed upon Fish, but subsists upon the Filth and Froth of the Sea.

Sturgeon was much esteemed by the antient *Romans*, and the Belly is reckoned best. It contains much Oil and volatile Salt, and yields a nourishing and solid Food, because of its thick and gross Juices. It is, also, hard, toughish, fat, and difficult of Digestion; and therefore it is injurious to weak and tender Persons, and those who are sick or recovering from Illnesses. As Sturgeon is fat, it relaxes the Fibres of the Stomach and Bowels, and renders the Body a little soluble. The Bones of this Fish, taken to the Quantity of a Dram. are looked upon to be opening, good for Rheumatisms and the Gravel; they extract what is called Mouth or Water-Glue from it, which is not so soon dissolved as the common sort, but produces the same Effects. *Lemery on Foods.*

STURNUS. Offic. Bellon. des Oyse, 321. Gesn. de Avib. 677. Charlt. Exer. 90. Jonf. de Avib. 96. Schw. A. 351. Will. Ornith. 144. Raii Ornith. 196. Ejsld. Synop. A. 67. *Sturnus vulgaris*, Aldrov. Ornith. 2. 632. Mer. Pin. 177. THE STAKE, OR STARLING.

It makes its Nest about Towers, and the Tops of Houses. Its Dung is esteemed a Cosmetic, and is said by *Galen* to cure the Alphi, Pani, Impetigo, and Morphew.

STYGLIA. An Epithet of caustic or corrosive Waters, and particularly *Aqua Regia*. *Castellus.*

STYLISCUS. στυλίσκος. See PRIAPISCUS.

STYLOCERATOHYOIDÆUS See STYLOHYOIDÆUS.

STYLO-CHONDRO-HYOIDÆUS. So *Douglas* names one of the Muscles called *Stylohyoidæus*, because it is inserted into the cartilaginous Appendix of the *Os Hyoides*.

STYLO-GLOSSI. See LINGUA.

STYLO-HYOIDÆUS. This is a small Muscle lying obliquely between the *Apophysis Styloides* and *Os Hyoides*.

It is fixed laterally by one Extremity to the Root or Basis of the *Apophysis Styloides*, and by the other to the *Os Hyoides*, at the Place where the Basis and Cornu unite; and also to the Cornu itself, from whence it has been called *Stylo-Cornu Hyoidæus*.

The fleshy Fibres of this Extremity, are often parted, and inclose the middle Tendon of the *Digastricus*. *Winslow.*

The *Stylo-Hyoidæi* move the *Os Hyoides* upward and backward in a middle Direction between those in which they lie; and they draw it more upward and backward when they act freely, that is, without being checked or confined by other Muscles. When one acts more than the other, the Bone is moved obliquely. *Winslow's Anatomy, Sect. 3. No. 1145.*

STYLOIDES Processus, five Apophysis. See CAPUT.

STYLO-PHARYNGÆUS. The Name of a Muscle belonging to the PHARYNX; which see.

STYLOS. στυλος. A Probe, of which various Sorts are used in Surgery.

STYMMATA, στυμματα, from στυφω, to astringe or inspissate, in Latin *Spissamenta*, Spissaments, are the Name which the Antients had for their most solid and substantial Ointments, and, also, for such Things as gave a Spissitude and Solidity to their Ointments. These latter *Stymmata* were some sweet-scented Simples, such as *Costus*, *Nardus*, *Amaracus*, *Amomum*, and *Mint*; which being mixed in the Composition



position of Ointments, communicated to them a Fragrancy, and preserved them from Corruption, as *Galen* says, *de G. M. S. L. Lib. 3. Cap. 1. Stymmata* differ from *Hedysmata*, ἡδύσματα, in that these latter are liquid. *Stymmata*, then, seem to be properly such Things as not only communicate a Fragrancy, but exercise their astringent Quality in such a manner as to preserve the Ointment, with which they are mixed, from Corruption. Thus *Ætius*, *Tetrab. 3. Serm. 1. Cap. 49.* in the Composition of a Troche, directs *Stymmata*, or Spissaments of a Decoction of the Bramble, Myrtle, Pomegranate Flowers, the Root of the Capparis, with the Leaves of the Willow, and other Things of that Nature. A little after, in the same Chapter, he directs dry Spissaments pulverized; also Pomegranate Flowers, Galli, Malicorium, Myrtle, Lentisk, and other things of the like astringent Quality. For the same Purposes, the *Stymmata*, in the Oil of Roses, are Lentisk, Calamus, and Aspalathus, as we are informed by *Dioscorides*.

STYPTERIA, στυπτήρια, from σῦψω, to astringe, Alum. See ALUMEN.

STYPTICA, from σῦψω, to astringe. Styptics, or Medicines, which stop Hæmorrhages. When a considerable Hæmorrhage is stopt by Absorbents or Styptics, it is always produced by means of a Clot of Blood secured by Compression, so that the Orifice of the Vessel is stopt. This Clot generally consists of two Parts, the one without and the other within the Vessel; that without is formed by the last flowing Blood, which, in coagulating, incorporates itself with the Lint, Moss or Powders, used for stopping the Blood. The other Part of the Clot within the Vessel, is only that Portion of the Blood which was ready to be discharged when the Vessel was stopped. These two Parts are often but one continued Clot; that without the Vessel performs the Office of a Covering, whilst that within it serves as a kind of Stopper. Both contribute to the stopping of the Blood by the Solidity they acquire in Coagulation, and their future Adherence the one with the internal Part of the Vessels, and the other with its external Orifice.

When Styptics or Escarotics are used, the Clot is sooner formed, than when Absorbents or simple Astringents are only employed. The Clot in the former Case possesses a larger Space in the Cavity of the Vessel, which makes the Stopper more deep. The Covering or external Portion of the Clot is also thicker, because at the same time the Styptics and Escarotics coagulate the Blood, they also burn a Portion of the Vessel and adjacent Flesh, which incorporating with the coagulated Blood, form together a thicker and more extensive Covering. *Mém. de l'Acad. Royale, An. 1731. Mr. Petit.*

Alcohol, or pure Spirit of Wine, is the most usual, and, perhaps, the best Styptic; and is the Basis of most of the celebrated *Arcana* for stopping Hæmorrhages. *Boerhaave* says, it becomes an immediate Styptic, as it prevents Putrefaction, and occasions a thin but very solid Eschar. For if Pledgits be dipp'd in pure Alcohol made hot, and applied to a bleeding Wound, if it be closely compressed upon the Part, and covered with a Piece of Bladder, lightly besmeared with Oil, and kept on with a proper Bandage, the Hæmorrhage presently ceases, and the whole Dressing may continue unmoved for three Days, in which Time the Vessels are usually closed, and strangely contracted and consolidated by means of the Alcohol. So far *Boerhaave*.

#### HELVETIUS'S STYPTIC.

The Method of curing fresh Wounds in a few Days without Suppuration, where neither Nerves, large Vessels, Bones, or any of the Viscera were concerned, has been long ago observed. *Purman*, a famous Surgeon of *Breslaw*, in his *Chirurgia Curiosa*, tells us of a Mountebank, who gave himself thirteen Wounds, by Incision, in the upper Part of his Left-arm, and thereupon applied his Nostrum, and with the Help of a good Roller was cured in two Days Time.

Next he mentions a martial Styptic, which stopped Bleeding incomparably, and healed fresh Wounds (as he says) in two Days, especially if the Patient took withal a few Drops inwardly. This has, also, been mentioned by *Blegny* near thirty Years ago.

When I came into *France*, I found that many little Trials were made there, also, with a Styptic Ball, mixed with *French Brandy*, by striking a Cock through the Head, opening the Crural Artery of a Dog, or chopping off a Dog's Leg, &c. But I found that it did not amount to any Thing of Consequence; yet I have still a Ball, made above twenty Years ago of Filings of Iron and an equal Quantity of Tartar, mixed well with *French Brandy* upon a Marble; this, with some Alteration, was afterwards published by the famous *Helvetius*, Physician to *Levis XIV.* of *France*, in a Book called, *Recueil des Methodes pour le Guérison de diverses Ma-*

*ladies*; which was reprinted in *Holland* in the Year 1710. This Preparation was then sold by *Pierre Rotterdam*, Apothecary at the *Hague* in *Holland*.

The Recipe for his Medicinal Ball I have translated, and it is as follows:

Take four Pounds of the Filings of Steel, and eight Pounds of Tartar, well powdered; mix these well together, and put them in a new earthen Pot, and pour thereon as much *French Brandy* as will make it into a Poulter's. Let this stand fermenting in a Cellar for four Days, and stir it between whiles. Then put it in *Balneo Mariae*, and distil it according to Art with a moderate Fire, to draw off the Brandy. When you find that nothing but the Phlegm comes off, take it from the Fire, and take out the Mass, stamp it very fine that not the least Lump may remain; then mix it again, as before, with a sufficient Quantity of Brandy, and put it into the Cellar to ferment, as before, and then distil it a second Time. This Operation may be reiterated seven or eight Times, but the last Time mix your Mass well upon a Marble, and form it into two Ounce Balls. One of these Balls is steeped in a Pint of good *French Brandy*, a little warmed, and hung only in it by a Wire, till the Brandy has received the Colour of the Ball. But if you are in great Haste, then grate a sufficient Quantity of the Ball in some Brandy, stir it well, and you may use it that very Instant.

No doubt but the Author thought, by often grinding, fermenting and distilling this Mass, to communicate and subtilize its Particles, so as to make it more fit to contract the Fibres and Vessels of a Wound, and to prevent Stagnations of the Fluids, both within and without, upon Contusions; but the Success did not answer, and therefore it was laid aside. Neither did *Helvetius* ever recommend it as an universal Styptic, astringent, or consolidating Medicine, but merely in fresh Wounds, and that only for a first Dressing, and where People lived at a Distance, and could not get immediately Assistance from a Surgeon. Besides, he makes several Exceptions where it should not be used, and in general advises where Chalybeate Medicines may be made Use of according to Experiments.

But last Year a Balsamic Styptic was published by one Dr. *Eaton*, good to stop all Manner of Bleeding without or within, and that without any Manner of Exceptions. This made me desirous to see it, and soon after I had an Opportunity to examine it: I found presently that this was the same old Medicine, which was got hither also, after other Countries had discarded it. But I neglected it that Time as not worth my Notice, till I saw lately a Treatise of Consumptions published by Sir *Richard Blackmore*, giving it the greatest Encomium that ever was given to any Invention whatsoever. For, says he, *Dr. Eaton's Balsamic Styptic bids fair for the Credit of a certain Remedy in stopping of Blood outwardly or inwardly, where the Crisis of the Blood is not entirely ruined, and will be of more Service to Mankind than all the Discoveries made by Galenical Compounders of Drugs, and systematical Methodists.*

Finding this Remedy recommended in so extraordinary a manner by so eminent a Physician, I began now to think that possibly I might have been mistaken, and therefore desired Mr. *Winterbottom*, an Apothecary in *Bow-Lane*, immediately to prepare the Recipe, as described by *Helvetius*. When this was ready, I sent for a Bottle of Dr. *Eaton's* Styptic, and tried them both with Galls before several Gentlemen; the Tincture was the same, a deep Purple. I then precipitated the Contents with Old Hock, and found the precipitated Matter to be the same in both. Not contented with my own Enquiry, I sent several small Quantities to others, and went myself to Mr. *Godfrey* the Chymist. They all told me, that there was no Difference betwixt them. I tried several ways to find out its balsamic Quality, from whence it has its Name, but found none. Then I confessed it surprized me, that a Man who had a Mind to vend a Thing as a Secret, had not done so much as to alter it either in Taste, Smell, or Colour, and yet this might very well have been done, without robbing it of its Virtue in the least.

My next Business was to try these two upon the crural Artery. Having got a good middle-sized Dog, Mr. *Kandy* laid the Artery bare, and opened it with a Lancet the length of the Artery, for near half an Inch. The old Trick used to be to cut the Artery crossways, and there was no Necessity of a Styptic at all, nor indeed here neither. But at first *Helvetius's* Tincture was applied, and stopped the Bleeding; then we opened the Artery again, and tried Dr. *Eaton's* with the same Success. I then had the Artery open-



ed in the other 'Thigh, and tried it only with *French Brandy*, which I found did as the other two. I opened the Artery again, and had dissolved in *French Brandy* a little *Sal Martis* and *Saccharum Saturni*, and applied that, and it answered in the same manner. This made me immediately conjecture, that there was but little Virtue in either of them, but only that the Brandy by its great Heat did merely contract the Fibres of the Artery, which, no doubt, might be a little assisted by the Chalybs; but this could not be much. I then reflected upon the Smallness of the Crural Artery in a Dog, and that it was no more to be compared to the crural Artery of a Man, than a Cock's Head to a Man's Head, and that a little Pledgit of Lint might have stopped the Blood without more to do, as well as the Temporal Artery, when opened with a Lancet, which we did, and the Pledgit of Lint stopped it. We then untied the Dog, and sent him going, who ran directly home. The Mistress of the House tore off the Pledgits, and had the Dog well washed with Butter and Beer warmed, she not knowing what had been done to him; upon which the Dog fell a bleeding again, tho' not much, and the Blood stopped of itself. Thus far as to its outward Use, and I could wish it were as harmless within. If only, according to *Helvetius*, it had been ordered to have been taken inwardly in fresh Wounds and Contusions, one might have let it pass; but when, without Exception, Dr. *Eaton* recommends it, as also even Sir *Richard*, in all outward Bleedings, I then thought it high time to make some Animadversions upon it. For Sir *Richard* himself says, in his Treatise of Consumptions, p. 99 and 101, that in spitting of Blood there is an Orgasm or stimulating Ferment: What is this but a Feverish Indisposition? And is there any Hemorrhage without it? Now if so, will not Brandy and Chalybeats heighten this? which by their Heat and Stimuli brace and irritate the Fibres, and accelerate the Blood's Motion. And will not then the Blood take up more Room, and press harder against the Sides of the Vessels, and whatsoever opposes it? Is not this the Way to make an Orgasm, and cause an Hemorrhage?

Dr. *Eaton* tells us himself, in his Book, p. 57, That it did very much overheat a Gentlewoman, and that her Bleeding still continued after the taking of it, and she might have perished, if a Surgeon had not given her a cooling and astringent Apozeme. And but just before, p. 47, he complains of a Physician, that was not willing that his Patient should take it, who had a hectic Fever upon her, because he was afraid that it was too hot.

Since the former Trials, on the 10th of *June* last, I desired Mr. *Ranby* to open the carotide Artery of a Dog, thinking that this Artery might give me more Satisfaction than the crural Arteries had done, to try the styptic Quality of the Tinctures of *Helvetius* and *Eaton*. Having laid bare the Jugular Vein, divided, and tied it, that its Bleeding might not hinder us from finding the carotide Artery, we were obliged to cut some of the Muscles through likewise, till, with some Difficulty, we found the Artery, which being opened with a Lancet, the Blood spouting forth, I applied to it *Helvetius's* Tincture, upon which the Blood stopped. I took it off in less than a Minute, and made it bleed again, but it bled but little, and then I applied Dr. *Eaton's* Styptic; we filled up the Wound with Lint, and stitched up the Integuments, then untied the Dog, and let him run down Stairs; where, after some Time I saw him again, and found he had bled a good deal, and was still bleeding. I was very well satisfied, that he would not bleed to Death, the Artery being so very small; and if he had had nothing but Lint upon it, it would have done as well. It must be observed, that the carotide Arteries are largest in Proportion in human Bodies, and that this Artery of the Dog was but little bigger than the crural Arteries of the former Dog. This shews that the styptic Quality of these Tinctures is very inconsiderable; and that *Helvetius's* Tincture is rather better than Dr. *Eaton's*, if there is any Difference, tho' I believe it proceeded from the Brandy, for my Brandy was stronger than Dr. *Eaton's*. I enquired for the Dog next Morning, and found him alive and well, only hanging his Head on one Side, which proceeded from the cutting through of the Muscles. Dr. *Sprengel*, *Philosophical Transactions abridged*, Vol. 8.

#### A RESTRICTING PREPARATION OF IRON, SOLD BY THE NAME OF COLBATCH'S STYPTIC POWDER.

Take any Quantity of Filings of Iron, and pour upon them Spirit of Salt to the Height of three or four Fingers above them; let them stand in a gentle Digestion till the Fermentation is over, and the Spirit of Salt is become sweet; then pour off that Liquid, and evaporate it in an Iron Glass Vessel until half is consumed; at which time put to it an equal Quantity of *Saccharum*

*Saturni*, and evaporate to a dry Powder. If upon its first becoming dry, the Operation be stopt, it has exactly the Appearance of *Colbatch's* Powder; but if it be continued longer, and the Heat raised, it will turn red. It must be kept close stopt from Air.

If this is not kept close stopt, it will imbibe the Air, and flow so as to lose its Efficacy. I have been informed from very good Hands, that this is the Styptic with which there was so much Noise made some time ago, by the Author of *Novum Lumen Chirurgicum*, and for the Sale of which a Patent was procured; only in that was used Oil of Vitriol, instead of the Spirit of Salt in this: but that Difference is insignificant. This is a Preparation of *Maet's*, once Professor at *Leyden*, and is in the *Collectanea Chymica Leydensis*; how much soever some have pretended to make a Secret of it since. It is commended as a Restricting in most Kinds of Fluxes inwardly, and particularly Hemorrhages. The Dose is from four to twelve Grains, and is conveniently given in any Forms, but Powders or Pills.

#### EXPERIMENTS MADE WITH MR. COL- BATCH'S STYPTIC, BY MR. WILLIAM COUPER.

I. A large Dog being provided, an Aperture was made through the common Integuments of his Abdomen, whence the small Guts were extruded. After an Incision made in one of them according to its Length, they were again reduced; the Wound in the Abdomen being stitched up, a Solution of this Powder was applied; the Dog continued without any ill Symptoms, and became perfectly well in a few Days after. The like Experiments I have made on another Dog, who in like manner recovered without the Appearance of any Medicine.

II. The Leg of a Dog was amputated three Inches above the Patella; the Expence of Blood from the Arteries was great, which did partly proceed from Unaptness of the Applications which were prepared; but after two or three Attempts, the Flux of Blood was stopped, and such a Bandage made use of, as was necessary only to keep on the Dressings. The Dog continued without any considerable Flux of Blood, and the next Day he was found on his three Legs.

III. The diseased Arm of a Man in St. *Bartholomew's* Hospital, was amputated above the Elbow; but for a Quarter of an Hour's Time many successful Applications of this Styptic were made, and at length a small Tent, dipped in the Powder itself, inserted into the Extremity of the bleeding Artery, before the Flux of Blood would admit the Application of Bandage. Five Hours after, a fresh Flux of Blood appeared, and strict Bandage was applied. The same Morning the abovementioned Amputation was made, a Boy about twelve or fourteen Years of Age, had his Leg also taken off below the Knee, to whose Stump divers successful Applications of this Styptic were also made, before it was bound up; and in less than an Hour after, a fresh Flux of Blood happened, and strict Bandage was added. Some Hours after these Operations, both these Patients suffered extravagant Pains. Three Days after, the Applications were taken off; and had any Person, a Stranger to what had been done, seen the Stumps, he would have supposed nothing less than an actual Caustic had been applied, as could have occasioned such large Eschars, and so horrid an Appearance; which did sufficiently denote this vulnerary Powder to be a violent Caustic.

Trials of Styptics on the Bodies of Quadrupeds have been commonly practised, to commend them to the Public; but it is not without Cause that Pretenders to such Remedies have made choice of younger Animals, as Dogs, Calves, and the like, for that purpose. But since the only Standard of their Use is their Success on the Human Body, we ought to make our Experiments on those Animals, whose Magnitude and Age bear a Proportion to it. For nothing is more obvious in wounding the Arteries of living Animals, than that the Protrusion of their Blood bears a Proportion to their Bulk; and in Dissection, the Arteries of the Fetus are remarkably thinner than those of an Adult; and those of aged Bodies grow still thicker, and frequently become cartilaginous, and at length entirely bony. Mr. *Couper*, *Philosophical Transactions abridged*, Vol. 3.

#### STYPTICUM REGALE.

##### *The Royal Styptic.*

Upon the sympathetic Powder four Ounces, infuse of good Oil of Vitriol half an Ounce; stir them well in a Glass-Mortar,



Mortar, with a Pestle of the same, and let them stand twenty four Hours on warm Sand, in a wide mouth'd Glass; grind this Mixture again with a little Spirit of Wine, and put it into a Matrafs; pour upon it more Spirit of Wine, to make that already used a Pint. Lute it well, and let it stand forty eight Hours in Digestion, often shaking it: Then let it stand to cool and settle, and decant the Spirit of Wine, which keep well stoppt. Remove the Cucurbit or Matrafs into a Sand Furnace; lute on its Head and Receiver, and drive over the Helm all that will rise by the third Degree of Fire, which also keep by itself: Let all cool, and take out what is left at the Bottom; powder it, and put it into a Cucurbit, and pour upon it distill'd Rain-water, one Pint; set it on warm Sand for forty eight Hours, and shake it often; then let it settle, decant and keep it for Use.

The impregnated Spirit and Water may be used apart or mixed; and if the Mixture be desired stronger, there may be put to it some of the acid Spirit drawn off, after the Spirit of Wine was decanted: But equal Parts of the impregnated Spirit of Wine and Water, evaporated to a Dryness, make the best Styptic of all. This is commended for a very powerful Styptic, and to be one of the best Vulneraries in the World, in curing all fresh Wounds by the first Intention (as is boasted so much of by Colbatch's Grand Styptic) that is, without Suppuration and Digestion.

STYRACINUM OLEUM. Oil of STYRAX, made by boiling a Sextans of Styra in a Sextary of the best Olive Oil. *Actius Tetrabib. 1. Serm. 1.*

#### STYRAX.

The Characters are;

The Leaves are roundish, the Calyx is dentated and am-pullous. The Flower is monopetalous, tubulated in the lower Part, and multifid in the upper, with its Lobes expanded in Form of a Star. The Ovary in the Centre of the dentated, multifid Calyx, becomes a roundish, fleshy Fruit, generally inclosing one or two Stones, which contain a Kernel.

*Boerhaave* mentions but one Sort of *Styrax*, which is, *Styrax*; folio Mali Cotonei, *C. B. P.* 452. *Tourn. Inst.* 598. *Boerb. Ind. A.* 2. 218. *Styrax*, Offic. *Styrax Arbor*, *Ger.* 1342. *Emac.* 1526. *J. B.* 1. 341. *Raii Hist.* 2. 1680. *Styrax arbor vulgaris*, *Park. Theat.* 1530. THE STORAX TREE.

It grows in *Italy* and other Countries. The Part used in Medicine is the Resin, of which there are two Sorts to be had at the Shops, the dry and the liquid. The dry *Storax* of the Shops, *Styrax Calamita*, *Rand. Ind.* 87. *Mont. Exot.* 11. is a fat resinous Substance, of a yellow Colour, inclining to red, concreted into Grains of various Bignesses, of a resinous, and somewhat acrid Taste, a very fragrant Smell, and flowing spontaneously from the Trunk of the Tree.

Observe, here, first, that our Apothecaries and Druggists sell in their Shops a most impure *Magma*, mixed with various heterogeneous Bodies, as Chaff, Hairs, Bran and Saw-dust (which perhaps gave Occasion for the *Styrax rubra nonnullis*) for *Styrax Calamita*. Secondly, we meet with Prescriptions in which the *Storax Calamita* and *rubra* are ordered distinctly. Now what is the Meaning of *Nicolaus* in making such a Distinction, there are different Opinions. Some by the *Styrax rubra* understand the *Thymiana*, others the best Sort of *Styrax*, which runs into Grains; and others again will have it to be nothing but the *Styrax* grown red with Age. The learned *Commelin* writes, that there are two Sorts of *Resin*, the dry and the liquid; the dry is sold in the Shops under two different Names, the *Styrax Calamita* and the *Styrax rubra*, which differ only in Purity. And *Hoffman*, (with whose Opinion we agree) tells us they are the same Gum, but different in Purity; for the *Calamita* also participates something of a Redness. But when we find in Medicinal Prescriptions the *Styrax Calamita*, we are to understand it of the *Styrax* in Grains, or of what is cleansed from Impurities; but by the *Styrax rubra* that most impure *Magma* of *Styrax* which is commonly sold in our Shops. Chuse what is fat, viscous, consisting of pale reddish Fragments, of a lasting Smell, and which yields a melleous Liquor when it is worked.

The *Storax liquida*, Offic. LIQUID STORAX, is a pinguous Liquor, of a melleous and tenacious Substance, of a brown Colour, or brown inclining to red, of a strong Smell, and flows from the Bark of the Tree. It heats, dries, mol-lifies and digests, and is very serviceable in Disorders of the Brain and Nerves, and cures Coughs, Catarrhs, Hoarseness, and the like.

There are also great Disputes among Authors about the *Styrax Liquida*. Some will have it to be the same as *Stacte*, that is, stillatious Myrrh, which appears to be a Mistake in that the Tears of Myrrh, on account of the Similitude of

Substance, will dissolve in any aqueous Liquor, whereas the *Styrax Liquida*, like other Resins, will dissolve in none but fat and oleous Liquors. Others affirm it to be a facitious Substance, prepared of a Solution of *Styrax Calamita*, in Oil and Wine, boiled with a Mixture of *Venice Turpentine*. When this Decoction is grown throughly cold, the *Styrax Liquida* is said to separate, and fall to the Bottom, sending up a more liquid and oleous Substance to the Superficies. Some will have it made by Expression, and others assert it an Oil expressed from the Kernels of a Tree whence the *Storax* flows; some, again will have it made by a Decoction of the Bark or Wood of the *Styrax*, others of liquid Amber. *Hoffman* asserts, that the *Styrax Calamita* and *Liquida* are the same Gum, and different only in Purity, so that the *Liquid* is the best. But what is sold for *Liquid Styrax* in our Shops is a Substance merely facitious, as I am assured by several Apothecaries in *London*. The *Storax liquida vera* is a Kind of Bird-lime prepared of the Bark of the *Rosa Mallos*, boiled in Sea-water, as I am assured by M. *Petiver*, in the *Philosoph. Transact.* N<sup>o</sup>. 313. What Sort of a Tree the *Rosa Mallos* is, and to what *Genus* to be reduced, is quite unknown to me, and therefore I can only add, that it grows in *Cebrofi* an Island in the upper *Red-Sea*, not far from *Cadesb*, which is three Days Journey from the Port of *Suet*. Whether *Cattar-mija* be a Name given by the *Turks* and *Arabians* to the Tree, or the Birdlime made of its Bark, is a Thing uncertain. This Birdlime is brought to *Judda*, and from thence in the Months of *June* or *July* to *Mocha*, where in Proportion to its Goodness it is sold from sixty to one hundred and twenty Dollars a Vessel, which weighs one hundred and twenty Pounds. The best is what has the least Mixture of Dirt or Dust, with which it is very often soiled, but very easily purified from them by the Help of Sea-water. *Dale*.

The *Storax-tree* has a Trunk like that of a Quince-tree, but has a whiter Bark; the Leaf, also, resembles the Leaf of that Tree, only is less and roundish, or ending in a blunt Point, covered with a hoary Down underneath, but green and smooth above. The Flowers on the young Sprays are like those of the Orange-tree, white, and several joined together, consisting of several Petals, and sweet-scented. The Fruit is of the Size of a Filberd, hoary, callous, of a brown Colour and bitterish Taste, opening into three or four carinated Figures, and discovering a lignous Stone, of the Colour of Box, which contains sometimes but one Kernel, channel'd with four Furrows, sometimes a double angulous Kernel, and sometimes a third. I suppose this, says *Ray*, to be accidental, for naturally one Stone includes only one Kernel. The internal Substance of this Kernel is unpleasant to the Taste. It grows plentifully in the Hedges and Woods in the Country about *Rome*.

The dry *Styrax*, called the *Styrax Calamita* of the Shops, has its Name from the *Calami*, or Canes, in which, as we are told by *Galen*, it was formerly brought from *Pamphylia*: It is a gumous and resinous Juice of the Tree before describ'd, concreted, dry, and of a very sweet Smell.

It was for a very good Reason that the *Styrax* was imported in Canes, since *Parkinson* found by his own Experience, that the pure Gum of *Styrax*, after he had by Art and the Help of a Press alone, rendered it depurated and fluid, did not only penetrate the Joints and Commissures of the Vessels, but the very Wood itself in the Summer Time, and flowed out, so that he was obliged to keep it in a Glass Vessel well stopp'd; but the Spaces between the Joints of Canes have no Chinks nor Commissures, and therefore are the better adapted for containing so scented and subtle a Gum. It may be observed, that the *Styrax-tree* in *Italy* produces but a small Quantity of Tear, which is the Case of many other Trees in that Country, which in a very hot Climate abound with Plenty of Juice. *Raii Hist. Plant.*

There are several gummy Substances, which are the Produces of this Tree: The first is the *Styrax Rubra*, "red *Styrax*," or, as some call it, *Thus Judæorum*, "the *Jews Frankincense*," because they suppose it to be the Resin which the wise Men offer'd to our Saviour. This is a reddish, or yellowish Substance, extracted from the Tree by Incision. A second Sort is the *Styrax Calamita*, so called because it was transported in *Calami*, or Canes of Reeds, to preserve its Odour: This *Styrax* is reddish on the Outside, and white within, and of a very pleasant, aromatic Smell. The third Kind is the *Styrax Liquida*, "liquid *Styrax*," which is an oily, viscous Matter, of the Consistence of an Ointment, of a greyish Colour, and aromatic Smell. Some extract an Oil from the Nuts, which is called *Styrax Liquida*.

The Virtues are the same as in *Turpentine*, only a little more effectual, as it is more fragrant: It is of Service in raising the Spirits, as, also, against Coughs, and Colds in the



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Head, being used by Way of Suffumigation: It is, also, useful in mollifying the Nerves and Tendons, and dissolving scirrhus Tumors. *Hist. Plant. ascript. Boerhaave.*

**SUBACTIO.** The working of any medicinal Ingredients, either with the Hands, as in making Plaisters, or with a Pestle in a Mortar.

**SUBALARIS VENA.** The Auxiliary Vein.

**SUBBUTEO.** The Name of a Bird, resembling the Bittern, but less.

**SUBCARTILAGINEUM.** The same as **HYPOCHONDRIUM.**

**SUBCLAVIA VASA.** The subclavian Vessels; that is, the Arteries and Veins which are situated under the Clavicles.

**SUBCLAVIUS MUSCULUS.** The subclavian Muscle.

This is a small oblong Muscle lying between the Clavicle and first Rib. It is fixed by one End in all the middle lower Portion of the Clavicle, at the Distance of about an Inch from each Extremity; and by the other, in the Cartilage and a small Part of the Bone of the first Rib. It seems, also, to adhere to the Extremity of the Clavicle next the Sternum, by a Kind of broad, thin Ligament.

The *Subclavius* can have no other ordinary Use, but to bring down the Clavicle, after it has been raised together with the *Acromion*, by the Action of the *Trapezius* and *Serratus Major*. It may, also, hinder not only the *Clavicle* in which it is inserted, but, also, the *Acromion* from rising, especially when assisted by the *Pectoralis minor*, *Rhomboides*, and *Angularis*.

When we stand, or sit, the Weight of the Arm alone seems to be sufficient to bring down the *Clavicle*, when raised; and therefore in this Case there would be no Occasion for the *Subclavius* to act upon the Clavicle, nor for the *Pectoralis minor*, *Rhomboides*, and *Angularis* to act upon the *Acromion*. But when we lie, or are situated in any other Manner, the Weight of the Arm has no such Effect; and in these Cases, these four Muscles become more or less necessary.

The *Subclavius* therefore is a proper Depressor of the *Clavicle*; and an Assistant Depressor of the *Acromion*, or of the Shoulder in general, together with the *Pectoralis minor*, *Rhomboides*, and *Angularis*, all which in their Turns assist the *Subclavius* in its Action on the *Clavicle*.

I cannot conceive what has led several great Anatomists to rank this among the Muscles of Respiration, since it is inserted not only in the Bone, but in the Cartilage of the first Rib; since this Cartilage is not articulated with the Sternum, but joined to it as immovably as to the Bone of the Rib by its other Extremity; and lastly, since this Cartilage is much shorter, much broader, and much less pliable than the Cartilages of all the other Ribs of equal Thickness. *Winslow's Anatomy.*

**SUB-COSTALES.**

These are fleshy Planes, of different Breadths and every thin, situated more or less obliquely on the Insides of the Ribs near their bony Angles, and running in the same Direction with the external Intercostals.

They are fixed by both Extremities in the Ribs; the inferior Extremity being always at a greater Distance from the Vertebrae, than the superior and several Ribs lying between the two Insertions.

These Muscles are more sensible in the lower Ribs than in the upper, and they adhere closely to the Ribs that lie between their Insertions.

The *Sub-Costales* having the superior Extremities of their Fibres much more distant from the vertebral Articulations of the Ribs, than the lower Extremities, it follows, that they can more easily move the upper than the lower Ribs, and consequently that they are Assistants to the *Sterno-Costales*. *Winslow's Anatomy.*

**SUBDITA, or SUBDITITIA.** Medicines which are introduc'd into any of the natural Orifices, as Pessaries, and Suppositories.

**SUBDUCTIO ALVI,** is purging the Belly, or procuring Stools.

**SUBER.**

The Characters are;

It is in all Respects like the *Ilex*, except in its Bark, which thick, spongy, and light.

*Boerhaave* mentions but one Sort of *Suber*, which is,

*Suber*; latifolium; perpetuo virens. *C. B. P.* 424. *Tourn. Infl.* 584. *Boerb. Ind. A.* 21 178. *Suber*, Offic. *Suber latifolium*, *J. B.* 1, 2. 103. *Raii Hist.* 2. 1393. *Ger.* 1163. *Emac.* 1347. *Park. Theat.* 1397. **THE CORK TREE.**

The Cork-tree is a Kind of ever-green Oak, of a thicker and firmer Texture, green above, and whitish underneath, not cut into so many Segments; in some Leaves smooth, and

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in others only a little indented about the Edges; the Acorns are smaller than those which grow on the common Oak, set generally two together upon one short firm Stalk; the Bark of the Trunk is rough, and of a great Thickness, which, if not taken off in its stated Time, will burst of itself, and come off, the young Bark appearing of a reddish Colour; they separate it by making a long incision from the Head to the Root of the Tree, which they take Care to do in dry settled Weather, for the young, tender Bark is liable to be destroyed, and the Trees killed by Rain. The Cork-tree grows in the southern Parts of *France*, and *Spain*, and *Italy*.

Cork is said to be restraining, and good for all Kinds of Fluxes; the same is said of its Ashes, or burnt Cork. *Mil-ler's Bot. Off.*

The Bark bruised and drank in warm Water, stops an Hæmorrhage; the Ashes of it burnt have the same Effect. *Raii Hist. Plant.*

The Fruit is astringent, and serviceable in the flatulent Colic; the Bark is detergent and astringent, and useful in Hæmorrhages, and a Diarrhæa; and burnt to Ashes, is resolvent and demulcent in the Hæmorrhoids. *Hist. Plant. ascript. Boerhaave.*

**SUBETH.** The Arabic Name for a CARUS.

**SUBETH SAHARA.** The Arabic Name for a COMA VIGIL.

**SUBFASCIATIO.** The same as **HYPODESMIS.** See **HYPODESMIS**, and **EPIDESMOS.**

**SUBFRONTALIS SUTURA.** The Suture by which the *Os Frontis* is connected with the Bones of the superior Jaw.

**SUBHUMERATIO.** The same as **CATOMISMUS.**

**SUBINTRANTES FEBRES,** are Fevers in which one Paroxysm begins, before the preceding ends.

**SUBLIGAMEN.** The same as **HYPODESMIS.**

**SUBLIGAMENTUM.** The same as **ENÆOREMA.**

**SUBLIMATIO.** Sublimation.

Sublimation differs little from Distillation, excepting that in Distillation the fluid Parts of Bodies only are raised, and in Sublimation the solid and dry Parts. The Matter to be distilled may be either solid or fluid; but Sublimation is concerned only in solid Substances.

Another Difference is, that Rarefaction, which is of great Use in Distillation, has little or no Efficacy in Sublimation; for the Substances which are to be sublimed, being solid, are incapable of Rarefaction, and can only be raised by Impulse. It may not, however, be improper to inquire into the Reason of such a Diversity in the Elevation of Bodies; why some ascend with a gentle Heat, and others are not to be raised with the most vehement Degree of Fire.

Fixed Bodies are such as abide the Fire; volatile, such as not being able to endure the Fire, are raised by the Force of its Heat. We will therefore begin with the first, and explain the Manner how in volatile Substances, which seem to be of the same Nature, there happens so great a Variety and Difference in their Elevation.

The Cause of this Elevation and Ascent in the Particles of Bodies, is to be ascribed to the Fire, not only on Account of its Impulse, but of another Property. The Fire insinuates itself into all the Interstices of these Bodies, and thus breaks the Cohesion of their Parts, so that they are at last divided into very small Particles, if not the most minute to which Art can reduce them. Particles thus separated lose much of their Gravity, for the Gravity of the same Particle decreases in the same Proportion as the Cube of its Diameter is lessened. Suppose, therefore, a Body whose Diameter is 12, and its Gravity 12: If then its Diameter be made less by 1, the Gravity of that Body will be only  $9\frac{1}{8}$  or thereabouts. For 1331, which is the Cube of the last Diameter, bears the same Proportion to  $9\frac{1}{8}$ , which 1728, the Cube of the first Diameter, does to 12, the Gravity of the Body. But if the Diameter be reduced to 10, the Gravity will but just exceed 6; and if it be diminish'd half, that is to 6, then the Gravity will be less than 2; so that very minute Corpuscles, when their Diameter is lessen'd in the utmost Degree, have scarce any Gravity at all. Therefore, when once they are thus divided, they are very easily sublimed.

But besides the Decrease of Gravity, there is another Result from this Division of the Particles of Bodies, which conduces very much to hasten the Ascent, and that is, the Variety of their Surfaces. For, the Surface of a Body decreases, in a very different Manner from its Gravity, only as the Square of the Diameter is lessened. Now, the Gravity decreases in such a Series as is expressed by the Numbers 1728, 1331, 1000, but the Diminution of the Surface will observe this Proportion, 144, 121, 100. And when upon reducing the Diameter to 6, the Gravity will be less than 2, and the Surface will still amount to 36. So that though the Gravity of a Particle be so lessen'd, as to be reduc'd almost to nothing,



thing, yet there will be Surface enough left, which will serve to raise it. This Argument, which has been explained by Calculation, may be demonstrated, as it were, to Sense, by the following Experiment. If Water be poured upon the Filings of Iron, and a little Oil of Vitriol dropped upon it, a Fermentation will presently arise, and the Globules of the Air, in striving to disengage and extricate themselves, will carry up with them some of the Particles of Iron to the Surface of the Water. This can happen upon no other Account, but that the Proportion of Gravity in the Filings of Iron is very small in respect to the Largeness of their Surface; and therefore Iron is forced upwards by a Body, which is a great deal specifically lighter than itself. But how much this must contribute to a more quick Ascent, will be much more evident to the Senses from the Sublimation of Camphire, Benjamin, and Arsenic; whose Particles, as they cohere but loosely, are for that Reason diffused into a larger Surface; upon which Account they are more easily sublimed than any other Substance; and, upon Account of their Surface, will even ascend sooner than some Fluids. So Flower of Sulphur rises sooner than the lightest Oil. By this Contrivance of Nature, that the Gravity of Bodies decreases in a triplicate, but their Surface in a duplicate Proportion of their Diameters, it happens that Bodies, which have a very different Gravity, may be raised with the same Force. Thus the Salts of animal Substances, as of Hartshorn, human Blood, Vi.ers, and the like, being composed of very minute Corpuscles, as is found by Experience in distilling them, easily ascend, because the Surface in them is not lessened so much as the Gravity. And the Salts of Vegetables, though of a more close Texture, are, by reason of their large Surfaces, without much Difficulty raised. The Corpuscles, also, of Minerals and Metals, though very compact and heavy, in some Measure yield to the Fire, and are capable of being sublimed. In all these Instances, the Breadth of the Surface, which exposes the Particles more to the Impetus of the Fire, is the Reason why they are raised with as much Ease as if their Gravity had been lessened by diminishing their Surface. So that Particles, though ever so different in Weight, may be equally raised by the same Degree of Heat, if the Proportion of their Gravity be reciprocal to that of their Surfaces. From what has been thus explained, may easily be deduced the Reason of all that Variety observed in the Volatility of Bodies. With regard to Fixation, as it proceeds from contrary Causes, it wants little Explanation; for he that thoroughly understands why some Substances can be sublimed, must, at the same Time, apprehend why others cannot. *Quincy.*

**SUBLIMATORIUM.** A subliming Vessel.

**SUBLIMIS MUSCULUS.** A Name for the *PERFORATUS Digitorum*.

**SUBLIMITORIUM.** The same as *HYPALIPTRON*. *Castellus.*

**SUBLINGUALES GLANDULÆ.** The sublingual Glands.

**SUBLINGUALIA.** Medicines lay'd under the Tongue, in order to dissolve there, and cure a Cough, or *Bronchocele*, or mend a fetid Breath.

**SUBLUXATIO.** An incomplete Luxation.

**SUBMERSIO.** Drowning. See the Operation of *Bronchotomy* under the Article *ANGINA*.

That in populous Towns, and even in less considerable Places situated on the Banks of Rivers, some Persons have almost every Year the Misfortune to be drown'd, is a Truth not to be call'd in Question; but it is not equally known and believ'd, that many Persons taken out of the Water without any Appearance of Life, would be rescu'd from approaching Death, if, for a sufficient Time, the proper Means of Relief were afforded.

After some short Attempts, we continue to esteem as dead, those in whom all Appearance of Life seems to be extinguish'd, especially if they have remained for a considerable Time, a few Hours for Instance, in the Water, in which Case no Measures are taken for their Recovery. Histories, however, related by Authors worthy of Credit, sufficiently evince, that the Lives of Men, who for several Hours have been not only in, but under Water, have been preserv'd, and that sometimes two Hours have elaps'd before there appeared any Sign that they were not really dead. The steep and dangerous Banks of some deep Lakes of *Switzerland* frequently occasion dismal Accidents of this Nature. The good Success of the Measures us'd for restoring such Persons, sometimes sooner, and sometimes later, have been publish'd in the *Swiss Mercury*, and these Measures we shall here enumerate, since it is to be wish'd that they were universally known, that they could be put in Practice on all Occasions that require them, and that in putting them in

Practice, the World might discover Measures still more efficacious and infallible.

Formerly it was thought the best and most expedient thing that could be done for the Recovery of the drown'd Person, to hang him up by the Heels: But since, from the Dissections made by skillful Anatomists, 'tis certain, that drown'd Persons have generally less Water in their Stomachs, than if they had voluntarily drank a considerable Quantity, it does not seem expedient to put the drown'd Person in a Position which would prove uneasy as soon as the Humours of the Body should resume their ordinary Motion. It may however happen, that the Person may have swallowed too much Water, and in order to know whether he has or not, and to make him vomit it up if he has, 'tis proper to put him into a Tun, open at both Ends, and which for some Time is to be roll'd backwards and forwards in different Directions. He may, also, be excited to vomit the Water by frequently introducing into the Oesophagus the bearded End of a Feather.

After taking off the Cloths of the drown'd Person, instead of letting him lie stretch'd and naked on the Shore, which is too often the Practice, we ought, with the utmost Expedition, to shelter him from the Impressions of the cold Air, and begin to warm him by wrapping him up with Cloths and Coverings.

In order to warm him the more effectually, he is afterwards to be put into a Bed, the Cloths of which are pretty warm, applying, also, frequently to his Body hot Napkins and Cloths.

There are Instances of drown'd Persons, on whom the Influences of a hot and scorching Sun, to which they have been expos'd, have produc'd the same happy Effects which the warm Cloths have upon others. Some have been warm'd in hot Baths, but these are not on all Occasions to be had.

The great Intention to be pursued is, to put the solid Parts of the Machine in Action, that thus they may restore the Motion of the Fluids. In order to answer this Intention, the drown'd Person is not to be left in Bed in a State of Rest, but agitated in an hundred different Manners, turn'd from one Position to another, lifted up and let fall, and shak'd in various Directions in the Arms of Persons of Strength sufficient for that Purpose.

Spirituos Liquors ought, also, to be poured into his Mouth, and where these cannot be had, 'tis customary to pour warm Urine into it, which has been observ'd to produce happy Effects. Some prescribe a Decoction of Pepper and Vinegar, to be us'd as a Gargarism.

We must, also, attempt to irritate the internal Fibres of the Nose, either by volatile Spirits, and the Liquors us'd in apoplectic Cases, or, by tickling the Nerves distributed to the Nostriis by the bearded Part of a Feather, or by blowing into the Nostriis through a Quill, Snuff, or some more powerful Sternutatory.

One of the Measures taken with such drown'd Persons as have been restored to Life, has been by Means of a Quill, or small Pipe, to blow warm Air into their Mouths, that thus it might be convey'd into their Intestines, into which it has, also, been successfully introduc'd by Means of a pair of Bellows. For this Purpose we may, also, use a Syringe, which might perhaps be still employ'd to better Purpose, in injecting warm Clysters capable of irritating the Intestines, and producing more considerable Effects than the Air generally convey'd to them.

But, perhaps, the most efficacious Method that can be taken with a drowned Person, is, by Means of a proper Pipe, to blow the Smoke of Tobacco into his Intestines. There have been several Instances at once of the speedy and happy Effects of this Smoke on drowned Persons.

None of all these Measures specified ought to be neglected, since they may possibly concur to produce an happy and salutary Effect; but they will prove most successful, when taken under the Management and Inspection of a judicious Physician. If a Surgeon can be had, Venesection is by no Means to be neglected, and perhaps it is most commodiously instituted in the Jugular Vein; for in drown'd Persons, as well as in those that are hang'd or seiz'd with an apoplectic Fit, the Veins of the Neck are too much distended and choak'd with Blood. Now if these Veins can happily be in some Measure emptied, they will be in a more proper Condition to act upon the Fluid they contain, and which, in order to restore the Patient, they ought to put in Motion.

When these Measures prove unsuccessful, the Surgeon's last Recourse is to *Bronchotomy*, or opening the *Arteria Trachea*; for perhaps the Air entering freely into the Lungs, through the Aperture made in the Canal through which they receiv'd it in their natural State, and the warm Air which

may



## S U C

may be blown through this Aparture, will restore the Playing of the Lungs, and all the Motions of the Breast.

But we must carefully advise all those who shall employ themselves in the humane and beneficent Office of restoring drown'd Persons, not to be discourag'd if the first Appearances do not answer their Expectations; for 'tis certain from Experience, that some drowned Persons have not begun to discover any Signs of Life, till they have been tossed about and tormented for more than two Hours. Besides, the Man who has succeeded in restoring to Life a Person whose Death, without his Assistance, was certain, is sufficiently rewarded for his Pains by the Success; and if his Pains and Diligence should fail of their desired Effects, he will still receive an exalted Pleasure from a Reflection on his having acted with the most noble and generous Views. *Brubier.*

SUBMISSIO, sometimes signifies a Remission; sometimes it imports the same as *Systole*, with respect to the Arteries, that is, their Contraction.

SUBPOPLITEUS MUSCULUS. The same as POP-LITEUS.

SUBPURGATIO. A slight, or gentle Purgation.

SUBSCAPULARIS MUSCULUS.

This Muscle is of the same Breadth and Length with the *Scapula* of which it occupies all the inner or concave Side, and from this Situation it has its Name. It is thick, and made up of several penniform Portions, nearly in the same Manner with the *Deltoides*.

It is fixed in the internal Labium of the whole Basis, and in almost the whole internal Surface of the *Scapula*, its fleshy Portions lying in the Intervals between the bony Lines when these are found. Near the Neck they leave the Bone, and form a very broad Tendon, which is inserted in the Surface of the small Tuberosity of the Head of the *Os Humeri*, close by the bony Channel. The lower Edge of this Tendon, probably sends off the ligamentary *Frænum* mentioned in the Description of the *Latissimus Dorsi*, *Teres Major*, and *Coraco Brachialis*.

This Muscle covers immediately the *Serratus Major*, being in a Manner inclosed between it and the *Scapula*. The upper Edge of its Tendon is joined to the lower Edge of that of the *Supra-Spinatus*, except at the upper Part of the bony Channel, where they give Passage to one Tendon of the Biceps. It likewise adheres to the capsular Ligament. The Tendons of the *Supra-Spinatus*, *Infra-Spinatus*, *Teres Minor*, and *Subscapularis*, being all joined by their Edges, form a Sort of Cap, which covers the upper Part of the Head of the *Os Humeri*.

The Use commonly ascribed to the *Subscapularis*, of pressing the Arm against the Ribs, from which it has the Name of *Porte-fuille* in French, is without Foundation. When the Arm hangs down in its natural Situation, this Muscle may turn it round its Axis, from without forward, as it happens when in this Situation we beat the Breast with the Fore-arm bent; and it likewise strongly assists the *Latissimus Dorsi*, when we turn the Hand behind the Back.

When the Arm being raised, we move it backward, as in giving a back Stroke with the Elbow or Fist, the *Subscapularis* hinders the Head of the *Os Humeri* from being luxated forward; for which Purpose it is well fitted both by its Structure and Number of its Fibres, this Motion being sometimes performed with great Violence.

It may likewise, by Means of the Nearness and lateral Union of its Tendon with that of the *Supra-Spinatus*, assist that Muscle in keeping the Head of the *Os Humeri* in the Glenoid Cavity, when the other Extremity of the Bone is raised. *Winslow's Anatomy.*

SUBSIDENTIA. The Sediment, or *Hypostasis* in Urine.

SUBSILLUM SANGUINIS. A dropping of Blood from the Nose.

SUBSULTIO. A Palpitation.

SUBSULTUS. An involuntary twitching, or spasmodic Contraction of the muscular Parts.

SUBVERSIO STOMACHI. A Subversion of the Stomach is a violent Vomiting, when what should pass into, or through the Intestines, is discharged by the Mouth.

SUBVOLA. The Part of the Hand otherwise called *HYPOTHENAR*, which see.

SUCCAGO. The inspissated Juice of any Plant. A *Rob* or Jelly.

SUCCEDANEUM. Any Drug, or Medicine, substituted for another.

SUCCENTURIATI RENES. Two glandulous Bodies situated near the Kidneys, called also, *Glandule Renales*, or *Capsule Atrabilarie*.

SUCCENTURIATUS MUSCULUS. A Name for the *Pyramidalis*. See *ABDOMEN*.

SUCCIDA LANA. Greasy Wool, that is, Wool impregnated with the Sweat of the Sheep.

## S U D

SUCCINGENS MEMBRANA. The Diaphragm.

SUCCINUM. Amber. See *AMBRA*.

SUCCISA. A Name for several Species of *SCABIOSA*.

SUCCOLATA. Chocolate.

SUCCOTRINA ALOES. Aloes of *Succotra*, esteem'd the best Species. See *ALOES*.

SUCCUBUS. A Species of Night Mare. See *EPHIALTES*.

SUCU. The Name of a Chinese Species of Apple.

SUDAMINA. The same as *HIDROA*.

SUDOR. Sweat.

Under the Skin, above the Fat, are disposed all over the Body what we call the *Miliary Glands*, which are closely united, each Gland furnished with an Artery, Vein and Nerve, and produce an excretory Duct or Vessel, which passes through a Perforation in the *Reticular Body*, and discharges through a wide Orifice, the Sweat under the Epidermis. These Ducts are cover'd with a hollow, and raised Valve, of a round Figure, and seated under the Skin; its Use is to transmit or restrain the Humour. This excretory Duct is the principal Organ of *Sweat*, in Conjunction with the *VASCULA Ruycheiana*.

The *Sweat*, thus secreted, varies according to the Differences of Air, Soil, Sex, Age, Temperament, Emunctories, Diet, Way of Living, and Time of Concoction, almost in the same Manner as does the Urine.

*Sweat* is seldom or never observ'd in a sound Body, unless from an Error in the Non-naturals; in its primary Effects it is always hurtful; by Accident it sometimes proves beneficial.

### Perpiration according to SANCTORIUS.

There are, besides the excretory Vessels above described, under the Scales of the Epidermis, exhaling Vessels, which open, obliquely, and are of such exquisite Subtlety, that *Leewenhoeck* computes that a hundred twenty-five Thousand of them will take up no more Space than a common Grain of Sand. Through these Vessels perpetually transpires a very subtle Humour, from all Points of the Body, which has the Name of *Sanctoriana Perspiratio*, from *Sanctorius*, who has the Glory of being the Discoverer and Persector of this important Doctrine in Medicine.

The Exhalation of this Humor is from the whole external Epidermis, and also from the Cuticula of the Mouth, Nostrils, Fauces, Larynx, Lungs, Oesophagus, Stomach, Intestines, Bladder and Uterus. Hence in Quantity it exceeds the Sum of all other Excretions; for in the Air of *Italy*, the Vigour of Age, easy Circumstances of Life, and moderate Eating and Drinking, the Quantity exhaled through the external Skin, and by the Mouth and Nostrils, amounts to five Eights of the Aliments received.

When this *Exhalation* or *Perpiration* is highly subtle, equable and undisturbed, in Quantity copious, and is augmented after Sleep, it is at once a Sign and a principal Means of perfect Health.

A Deviation, or Alteration, in any Manner, from the Qualification just required in *Perpiration*, is the first and most certain Forerunner of some Disorder, and perhaps the Cause of it.

*Perpiration* is effected, preserved, increased and restored by a robust State of the Viscera, Vessels and Fibres, by Exercise and Motion to the Degree of an incipient, gentle Sweat, by the moderate Exercise of Venery, excited by the Health and Strength of the Body, and not by the Advice and Infligation of the Mind, by a Sleep of seven or eight Hours, with the Body well cover'd, but not oppress'd under a Load of Clothes; by moderate Cheerfulness, Youth, solid but light Aliments, fermented, not fat, and season'd very slightly with Spices, and by pure, serene, dry, weighty and cold Air.

The Contraries to all these Requisites beforemention'd, as well as an Augmentation of all the other Excretions, diminish, obstruct and deprave the Action of *Perpiration*.

Hence we learn the Matter, Cause, Effects, Necessity and Uses of this *Perpiration*; that it is especially serviceable to Flexibility, Softness, and Restoration of lost Substance, and principally that the humid and quick nerveous Papillæ might be fit for the Impression of Objects, and transmitting the Effects of that Impression.

It appears also that when Sweat is increased, and its Vessels enlarged, that *Perpiration* is of Necessity diminished, and its Vessels compressed.

And that with violent Motion, and excessive Heat, this *Perpiration* is turned into Sweating; but that with gentle Motion and a moderate Degree of Heat, it is very much promoted.

That nothing more conduces to a free *Perpiration* than gentle and long continued Friction.

That



That long and copious Sweats highly check and weaken it, and that such Sweats are constantly and necessarily Attendant on weak, wasting, consumptive, fainting and dying Persons.

Questions to be solved on this Head are ;

Why immediately after Eating, and also a long Time after the same, *Perpiration* in a healthy Person is diminished ?

Why *Perpiration* is greatest in the fifth and the twelfth Hours after Eating ?

Whence it comes to pass that riding on Horse-back, or Gestation in a Coach, or Ship, but especially violent Motion on the Ice, or in the Snow, so highly promote *Perpiration* ?

SUDOR ANGLICUS. The Sweating Sickness.

This Disorder is so call'd from the Island in which it first appeared, in 1483. among the Soldiers of *Henry VII.* when he landed at *Milford Haven* in *Wales*, whence it spread itself and rag'd in *London*, from the 21st of *September* till the End of *October*. In the same City it returned five Times, and always in the Summer: First in 1485; then in 1506. Afterwards in 1517, when it was so violent as to take off the Patient in three Hours, and so universal as to attack People of all Ages and Conditions; so that half of the inhabitants of several Towns in *England* fell Victims to its irresistible Fury. It appear'd the fourth Time in 1548, when it generally prov'd mortal in six Hours; and then it appear'd in 1529, at which Time alone it spread itself to the *Netherlands* and *Germany*; in the latter of which it prov'd very fatal. The last Return of it in *London*, was in 1551, when it rag'd with such Fury, as in one Day to take off 120 of the Inhabitants of *Westminster*. At *Shrewsbury*, the Residence of the celebrated *Caius* or *Kaye*, from whom this Account of the Disorder is taken, it rag'd with such Inclemency as almost to depopulate that whole Quarter of the Country, cutting off some when travelling on the Road, and others when at home minding the Concerns of their Families. Some when awake, and others when fast asleep; so that in large Families few remained free from the Disorder; in such as were less numerous generally none; and among those, who were seiz'd with it, some died in a Moment, and others one, two, three, four, or more Hours after they began to sweat. So that those who were brisk and healthy at Dinner, were often dead before Supper; but none who surviv'd the Disease were ever out of Danger, till 24 Hours after its first Attack. From such Beginnings it increased so much, and spread so far, as to strike Terror into the Inhabitants of all *England*; and had this unlucky Circumstance, peculiar to itself, that Flight, which in other contagious Disorders is the best Method of Prevention, was of no Use; for not only such of the Natives of *England* as left the Towns, and betook themselves to the Fields, but, also, those who retir'd to *France*, *Holland* and *Scotland*, were equally subjected to it as if they had taken no Precaution; whilst, what is equally, or still more surprizing, Foreigners residing in *England* were not attack'd by it.

It seiz'd different Patients in different Manners; for in some it first appeared with a Pain in the Neck, Scapulae, Legs or Arms; whilst others perceived only a Kind of warm Vapour or Flatulence running through these Parts. And these Symptoms were suddenly succeeded by a profuse Sweat, which the Patients could not account for. The internal Parts became first warm, and were soon after seiz'd with an incredible Heat, which thence diffus'd itself to the Extremities of the Body. An intolerable Thirst, Restlessness and Indisposition of the Heart, Liver and Stomach, were the next Symptoms, which were succeeded by an excessive Head-ach, a Delirium, in which the Patient was very trifling and talkative, and after these a Kind of Extenuation of the Body, and an irresistible Necessity of Sleeping.

In some the Sweat stopp'd in the Beginning, and their Limbs became moderately cool. But this Evacuation being afterwards promoted, the Matter of it was of a disagreeable Smell, of different Colours, according to the Nature of the Patients Humours; sometimes more and sometimes less in Quantity, and of a pretty thick Consistence. Some were seiz'd with a *Nausea*, and others with a Vomiting; but these Symptoms happen'd almost only to such as had overloaded their Stomachs with Aliments. All without Exception were afflicted with a difficult and frequent Respiration. The Urine had nothing preternatural, except that it was of a thicker Consistence, and ting'd with a fainter Colour than usual. The Pulse was also more quick and frequent than in a natural State. In those, however, who breath'd the least corrupted Air, and of the best Constitutions, the Disease was more mild and temperate, being generally accompanied with no worse Symptoms than a preternatural Heat and Sweat.

From the Symptoms now enumerated, *Kaye* defines this Disorder to be a diary Fever of the pestilential and contagi-

ous Kind, and to support his Definition reasons in the following Manner.

The profuse Sweat is, in this as well as in other Fevers, produc'd as a Symptom by the excessive Agony and Heat of the Patient; for as they who work hard have the Whole of their Bodies cover'd with Sweat, so those who labour under violent internal Disorders are subject to copious Sweats, which are the Instruments Nature uses, in order to carry off the Cause of the Disease. If she is vigorous enough to produce this Effect, the Patient is preserv'd; but if she is too faint and languid, he falls a Victim to the superior Force of his Disease; for if this Sweat flows spontaneously, and is duly carried on, it is of the salutary and beneficial Kind; but if it is totally check'd, or too much diminished, it is either mortal, or highly dangerous; for the Truth of which the Author appeals to the Experience of his Countrymen.

The learned and ingenious Author next proceeds to shew ;

1. Why this Fever is of diary Kind.

2. From what Causes it proceeds, &c.

3. Why the Inhabitants of *Britain* alone are subject to it.

The First he accounts for from the particular Nature of the Poison which, he says, is of the putrid Kind. The Second he explains from the Situation and Air of *Britain*; which last is subject to be impregnated with noxious Exhalations, proper to produce Diseases of the putrid Kind. And the Third he Accounts for from a particular Finesse and Disposition in *English* Constitutions, to receive and be acted upon by this Poison. But as the learned Disquisitions of the Author, on these Points, would swell the Article too much, and are not very satisfactory, we shall proceed to give the Method he prescribes, both for the Prevention and Cure of this Disorder.

For preventing this Disease, then, he orders Temperance, and the Choice of salutary Aliments, and Drinks. No crude Pot-herbs nor Sallads are to be used, because they may have received a noxious Quality from the Air; or if they are us'd, they are to be previously wash'd with warm Water. The following Powder is to be sprinkled on the Aliments.

Take of Mace and Cloves each two Parts, of Zedoary and Dittany Root each one Part; of all the Sanders each half a Part, of red Coral and red Roses each one Part; of Cinnamon three Parts, of Pearles one Part, and of Sugar a sufficient Quantity. Beat all and reduce to a fine Powder.

The Air is, also, to be render'd as pure as possible, by removing those Things which can corrupt it; such as Carcases of Animals, stagnant Waters, and other Things of a like Nature, and by correcting and altering its peccant Quality, by Means of constant Fires, especially in the Morning and Evening; and by burning in the Room fragrant Substances. When we go abroad, which should be as rarely as possible, we should carry in our Hand a Preparation to smell to, which he orders be made in the following Manner.

Take of the *Nux Unguentaria*, Mace, Cloves, Saffron, Cinnamon, and Chian Mastick well triturated, each one Part and an half, of Storax two Parts and an half, of Ladanum four Parts, with a few Grains of Amber and Musk, dissolve in aromatic Wine, and make into a proper Consistence for a Palle, to be smell'd to.

The Steam of Scordium or Vervain, receiv'd into the Mouth before going abroad, is an excellent Preservative against this Disease; as also holding continually in the Mouth a Piece of Zedoary or Elicampagne Root, macerated for a Night in Vinegar of Roses.

No one must go abroad fasting, for at that Time the Body is more subject to Infection than at others. 'Tis, therefore, proper to take, before going out of the House, a proper Quantity of *Theriaca*, either by itself, or in a Glass of distill'd Water of Sorrel, or Scabious. The Troches of Vipers, and several other Things of a like Nature, are, also, proper for the same Purpose; but the most efficacious Preservative is by the Author said to be the following.

Take of Sorrel, red Roses, yellow Sanders, Spikenard, Cinnamon, Saffron, and Citron Seeds each one Part, of *Armenian* Hole one Part and an half, of seal'd Earth half a Part, of prepar'd Pearles half a Part, with the Addition of some Leaf-Gold, all which are to be triturated, and taken in a small Quantity of Vinegar.

In plethoric Persons the Quantity of Humours are to be diminish'd by Abstinence, or by Venesection, and other Evacuations, as the State of the Person shall require.



## S U F

After the Sweating Sickness has seiz'd a Patient, the best Method to be pursued is to promote the Sweating for a due Time; for by this Means alone the Disorder is remov'd. For this Purpose the Patient is to be kept warm, and due Care is to be taken, that he does not, thro' Ignorance or Restlessness, expose any Part of his Body to the open Air. The Patient must be attended, and have his Sweat continued for twenty-four Hours, because at that Time the Disease generally terminates in an happy Manner. During all this Time, the Patient must abstain from all Aliments, and from Drink of every Kind for at least five Hours, unless the Patient's Strength is so exhausted, as to call for a supply of them, which, however, can hardly happen in so short a Time. If the Sweat does not flow spontaneously, Frictions with moderately warm Cloths may be us'd, taking Care to prevent the Access of the Cold; and if by this Means he sweats, we are to abstain from other Methods; but if none of these will do, sudorific Potions are to be us'd. Sleep is to be prevented, by calling on the Patient with a shrill Voice, and pulling him till both the Desire and Necessity of sleeping are remov'd. After the Patient is recovered, he is not too soon to go abroad, nor expose himself to the open Air, by doing which many have been taken off by an incurable Flux. *Gaius de Ephemer. Britannica.*

**SUDORIFERA.** The same as **SUDORIFICA.**

**SUDORIFICA.** Sudorifics; Medicines which excite Sweat. See **DIAPHORETICA.**

**SUFFERSURÆ.** Puellous Eruptions, which break out upon Children, on Account of Heat. *Forellus.*

**SUFFIMENTUM.** A Suffumigation. This differs from odoriferous Substances, because the latter diffuse their Odour without the Assistance of Fire; whereas the former does not exert its Influence without the mediate or immediate Action of Fire.

There are two Kinds of Suffumigations, one subservient to Pleasure, and another contributing to Health; both of them are either dry or moist. The Suffumigation for Pleasure is, also, call'd *Suprapax*; whereas that for Health is more properly call'd a Vapour or Steam.

That subservient to Pleasure, and the Purposes of Luxury, is made up of fragrant and sweet-scented Substances, and may be us'd either in the Form of a Powder, Troches, or medicated Candles. The first of which may be prepared of Storax, Benjamin, the Root Acorus, Zylaloes, Marjoram Leaves, Orange and Lemon Peel, Mace, Cloves, Cinnamon, Camphire, Amber, Musk, and Civet, in due Quantities, reduc'd to a Powder. The second may consist of the said Powder put in melted Gum Tragacanth, and made up with some proper Water: And the third may be prepared of the odoriferous Gum melted, with an Addition of the above-mention'd Powder, Gum Tragacanth, or Ladanum melted, and a proper Quantity of Musk, or Amber. Though this Species of Suffumigation is principally intended for Pleasure, yet as it consists of cephalic and cordial Ingredients, it must necessarily contribute to corroborate the Brain, recruit the Spirits, and prevent their assuming a malignant Quality. The moist Suffumigation for Pleasure consists of Storax and Benjamin; or if you please, a small Quantity of the above-mention'd Powder dissolv'd in some odorous Water, such as that of Roses.

The Suffumigation contributing to Health, is either corroborative, and consists almost of the same Ingredients with that for Pleasure, or it is alterative, dries the Brain, purges the Lungs, provokes the Menfes, and prevents a Suffocation. The dry Species of this Suffumigation is prepared of sweet-scented Substances, such as Ladanum, Storax, and Benjamin, and sometimes of Galbanum, Asa-Fœtida, and Castor, which are highly beneficial in several Disorders of the Uterus. This, also, may be exhibited either in the Form of a Powder, consisting of the above-mention'd Ingredients, or in the Form of Troches, prepared as above. A Suffumigation of this Kind is, also, sometimes made by throwing Tobacco alone on the Coals, and collecting the Steam in a Funnel, or some proper Instrument; this powerfully purges the Brain, and frees the Breast from pituitous and bilious Excrements. This Species of Suffumigation is us'd either for corroborating or altering, for drying the Brain, removing Catarrhs, and Phlegm generated in the Breast in various Disorders. Suffumigations of Tobacco, Colt's-Foot, and Sulphur are beneficial for drying Ulcers of the Lungs, and for several other Disorders of the same Kind. The moist Suffumigation for Health, consists either of some simple Liquor, such as Vinegar, Wine, Aqua Vitæ, or Rose-water; but in hard, oedematous Tumors to be discuss'd, the Fire-Stone, or a Brick ignited, are to be put into the Vinegar, and the Steam received; this is, also, frequently done in

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the Plague: Or the moist Suffumigation for Health may consist of a Decoction of proper Ingredients. This Preparation is principally us'd in Disorders of the Uterus, in stopping or promoting the Menfes, in Dysenteries, Disorders of the Anus, Ears and Eyes. This Species of Suffumigation is us'd for drying, constricting, relaxing, softening, discussing and opening. *Morelli de Formul. Remedior.*

### SUFFIMENTUM CATARRHALE.

#### *A Fume for a Catarrh.*

Take Olibanum, Amber, Benjamin, Storax, Gum Guaiacum, and Balsam of Tolu, of each two Scruples; make all into a gross Powder to burn.

Where the Defluction is very thin, and has much of its Cause in the Laxity of the Glands, such Means may do Service by constringing the Parts, and repelling the Flux, inasmuch that it may be thrown off by other more proper Outlets; but where there is an Asthma, and very weak Lungs, there is great Reason to fear Mischief; because checking the Rheum will thicken it, and make it pass with greater Difficulty through the pulmonary Vessels, when, in the Course of Circulation, it comes thither. The following, therefore, may be less inconvenient, though this may, also, be used in the same Manner, to burn upon Coals, only receiving the Steams with a Cap before it is put on, especially at Night going to Bed.

Take of Gum Guaiacum, Gum Juniper, Mastich, Myrrh, each a Dram; Cloves, two Drams; Balsam of Peru, sixteen Drops: Make them into a coarse Powder.

Filling a thick Cap frequently with the Steam of this burnt upon Coals, may, with sometime using, strengthen the Fibres, and particularly the Glands about the Head; whereby they will not be subject to those Suffusions of Lymph, which ought to be remanded by other Secretions, and principally by Urine.

### SUFFIMENTUM HYSTERICUM.

#### *An Hysteric Fume.*

Take of Asa-Fœtida, one Ounce; best White-Wine-Vinegar, a Pound; boil them in a Pot with a narrow Mouth, and let the Patient hold her Head over it, with her Mouth open.

This is an untoward Application, and seems justifiable only in Cases where other Means cannot be used; though in some Kind of hysteric Convulsions, Steams this way received up the Nose have very sudden and remarkable Effects.

### SUFFIMENTUM ODORIFERUM.

#### *A sweet-scented Fume.*

Take of Benjamin, one Ounce; Storax, half an Ounce; Labdanum, two Drams; Musk and Amber-grease, each five Grains: Make them into a fine Powder, to mix with Wax for Candles.

The Scent of this burnt in Places suspected of Contagion, or infected with any noisome Steams, is not only pleasant but beneficial. They are likewise very agreeable to light Pipes with.

### ANOTHER.

Take of Cypress Roots, and Calamus Aromaticus, each one Ounce; Rosemary, one Handful; Storax, and Benjamin, each two Drams; Frankincense, two Ounces; Make all together into gross Powder to burn.

This is useful to take away the ill Scent of a Room, from what Cause soever it be; and in a Time of pestilential Contagion, would be beneficial to burn for an Hour or two every Morning in all the Rooms of an House, or some convenient Place, where the Whole may be filled with its Steams. And, by this Caution, many Families who lived in London during the last great Plague, escaped being hurt by it.

SUFFIMEN-



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### SUFFIMENTUM AD PROCIDENTIAM ANI.

*A Fume against the falling down of the Fundament.*

Take of Frankincense, Mastich, Amber, and Cloves, each a Dram; Red-Rose Leaves, and Balauftines, each two Drams: Make them into a gross Powder.

This is to be burnt upon a Chaffindish of Coals under a Chair, with a Hole in it, over which the Patient is to sit with the Part bare, after the Gut is thrust up; and by such Means continued, will the Sphincter at last get Strength enough to keep it up without any such Help. In a Tenefmus it is, also, of Use.

### SUFFIMENTUM AD PROCIDENTIAM UTERI.

*A Fume against the falling down of the Womb.*

Take of Myrrh, Mastich, Cinnamon, and Spikenard, each a Dram; Mint, and red Roses, each two Drams; Cloves, Zedoary, and Pimento, each half a Dram: Make them into a gross Powder to burn.

This is to be used as the preceding, and in the same Weakness it is, also, good, as that is of Service in this. These are very easy Remedies, and might be beneficial in many uterine Weaknesses, where Persons are too squeamish or Prejudiced to take necessary Medicines another Way. Fumes from hot, aromatic Liquors, which are sometimes directed to the same Purposes, are hardly so efficacious as those which arise from the burning, dry Ingredients; because their Moisture prevents their being so immediately restringent.

SUFFITUS. The same as SUFFIMENTUM.

SUFFO. This is explain'd by *Rulandus* and *Johnson*, *Panis Porcinus*.

SUFFOCATIO UTERINA. A Strangulation of the Uterus, an hysterical Symptom. See *HYSTERICA*.

SUFFRUTICES, in Botany, are Under-Shrubs, or small Shrubs, with ligneous Branches, and small Leaves.

SUFFUMIGATIO. The same as SUFFIMENTUM.

SUFFUSIO. A Cataract. See *CATARACTA*.

SUFFUSIO AURIGINOSA. A Jaundice.

SUFUFF. Compound Powders, in the Shops call'd *Species*. *Castellus*, from *Libanius*.

SUGILLATIO. Sugillation. See the Article *CONTUSIO*, for the Difference betwixt a Sugillation and *Ecchymosis*.

SUGITIVA. Medicines which consume the Scrofulities of hydropical Persons. *Castellus*.

### SULPHUR.

The Sulphur of the Shops, called *ῥαψ* in *Greek*, because used in all expiatory and other sacred Rites, is a mineral, concreted Juice, solid, dry, friable, fusible by Fire, and very easily inflammable. The Flame it emits is blue, and the Smell of burning Sulphur is strong, subtle, acid, and very prejudicial to the Lungs.

Sulphur is of various Kinds; it is, in the first Place, divided into *ἀπύρον*, or native Sulphur, which has never been exposed to the Fire; and *ἑμπύρον*, or factitious Sulphur, prepared by Fire. It is either of a yellow, yellowish, Ash, or light Colour, and either pure or impure in Substance.

Native Sulphur, termed *Sulphur Vivum* in *Latin*, is of two Kinds; one pellucid, and shining like Gold, and either of a citrine or greenish Colour. This is found about the gold Mines in *Peru*, *Switzerland*, and many other Places. The other is opaque, found either in hard, solid, shining, greenish, or yellow Lumps, or in form of a clayish Glebe, of a light Ash Colour, or yellow. This Kind is dug near all the burning Mountains, near some sulphureous Springs, and in several other Places of *Europe* and *America*.

Factitious Sulphur is prepared in different Manners: In some Places it is obtained by boiling of Water; and at *Buda* in *Hungary*, according to *Agricola*, it is evaporated along with the Water of the mineral Springs, and concretes in the Covering, or Dome of these Fountains, like Flower of Brimstone, and is gathered from thence, once every Year, with great Care. It is, also, extracted from a Sort of Ash-coloured, argillaceous Earth. Thus in some Places of *Italy* there are Mines, out of which a fat, white, argillaceous Earth is dug, mixed with some blackish Veins; and this Earth being put into very capacious earthen Vessels, and distill'd, the melted Sulphur runs out at the Rostrum of the Alembic into a Receiver, where it soon concretes into large Lumps. After the Distillation is over, a red Earth remains, which is thrown away as useless. Sulphur is, also, often ex-

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tracted from a Kind of *Pyrites*, especially near *Liège*, where there is a Kind of *Pyrites* like Lead Ore, which being dug up, is broken into small Pieces, and then thrown into very large Crucibles, or rather earthen Cucurbits of a quadrilateral Figure, with a narrow Orifice: These Vessels are placed in proper Furnaces, in an inclined Position, where by the Sulphur contained in these Stones, being melted by the Fire, runs into Leadens Vessels filled to a certain Height with Water, where it concretes immediately; the Substance which remains in the Cucurbit containing a large Portion of Vitriol. If by this first Operation, the Sulphur be not sufficiently pure and clean, it is melted a second Time in Iron Vessels, and boiled with the Addition of a certain Quantity of Linseed Oil; afterwards it is made up, either in large Lumps, or is thrown into hollow Cylinders of Iron, rubbed over with Oil on the Inside, and so is formed into Rolls.

Sulphur so prepared is called common Brimstone, or common Sulphur, and is of two Kinds, yellow, or greenish; which last is preferred for the Extraction of Oils or Sulphurs from other Bodies, as containing the greatest Quantity of vitriolic Salt. Common Sulphur melts by Fire, is easily inflammable, emitting a fine blue Flame, with acid Effluvia, which affecting the Nostrils and Lungs, excite Coughing: An electrical Quality is likewise observed in it. It is not soluble by Acids, but very readily by alkaline or oily Substances. When fired in the open Air, it flies almost all away, a small Portion of a Kind of metallic Earth only remaining: But if the Vapours that ascend from burning Sulphur be collected with Care, it becomes an acid Liquor, of the same Nature with Spirit of Vitriol, without any apparent Mixture of oily or bituminous Parts: But if Sulphur be distilled in an Alembic, or any other close Vessel, the Vapour does not then turn to a Substance of a different Kind, but concretes in form of a yellow, sooty Dust, called Flowers of Sulphur, which is of the same Nature as it was before Distillation. *Geoffroy*.

### THE EXAMINATION OF SULPHUR.

Perfect Sulphur is found in the Mines, under very different Forms; sometimes smooth and yellow; sometimes yellow and almost transparent, like Amber; sometimes red, and almost transparent, like a Ruby; but more frequently of an opaque, grey Colour. Any of these Sorts being put into a Crucible, easily melt in the Fire, and so long appear transparently red; but when cold, they again become opaque. Sulphur, as soon as melted, readily takes Flame upon the Admission of the external Air, and burns blue; the Vapour whereof, being received with the Breath into the Lungs, proves suffocating to all Animals. It entirely burns away, or scarce leaves any Residue behind: If kept melting in the Fire without burning, it discharges a strong-smelling Acid, but not suffocating Vapour. As soon as melted, some Part of it goes into the Air; and if long kept fused, without burning it, it all gradually becomes volatile, and vanishes. When cold, it is extremely brittle; and when melted by Heat, it seems viscous, like Pitch; and in neither Form will mix with Water. It will never dissolve in Alcohol alone; if its Powder be mixed with any Acids or Alkali, it gives not the least Signs of Ebullition, or Effervescence; so that it has not thus the Effect of an Acid or an Alkali. If taken crude into the Body, by small Doses frequently repeated, it wonderfully cleanses the first Passages, at length purges strongly, and then effectually cures certain cutaneous Diseases, and such as proceed from Worms or mercurial Fumes.

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Hence the Nature of Sulphur may be in some Measure understood, as found naturally in the Earth. And hence it appears, why the Chymists have called it the Rosin of the Earth; for, excepting that it does not dissolve in Spirit of Wine and Alcohol, in other Respects it approaches to Rosin.

### THE FLOWERS OF SULPHUR.

1. Take six Ounces of common Sulphur, put it into a Body of *Hessian* Earth, apply a capacious Glass-head, close the Juncures with a Mixture of equal Parts of Clay and Ashes, wrought up with Water; set it in a Sand-Furnace, so that the same may almost touch the lower Rim of the Glass-head; let the Pipe of the Head, and, also, the Body itself incline a little downwards, that the Moisture may run into the Receiver fixed for that Purpose; make a gradual Fire, and continue it till the Head begins to grow dark



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dark with the ascending Flowers; a little Water will rise and come into the Receiver; cautiously keep up the Fire, that the Heat may not melt the Flowers in the Head, and yet be sufficient to sublime the Sulphur; continue thus for eight Hours, and at length increase the Fire, till the lower Rim of the Head grows almost so hot as to melt the Sulphur; the Sulphur will now be sublimed into a yellow, light, rarified, soft powdery Substance, called Flowers of Sulphur.

2. This Experiment is sufficient for our present Purpose; but those who make Flower of Brimstone for Sale, have entire Furnaces built for the Purpose; with two Chambers or Partitions, one containing the Sulphur to be sublimed, where the Fire is placed, and the other adjoining to it, communicating therewith, and kept cold. Both of them are exactly stopp'd up, to exclude the Air; and thus the Sulphur being urged in one Chamber, by the Heat of the Furnace, and render'd volatile, flies into the other which is cold, and there collects together. When the Operation is ended, and all grown cold, the Furnaces are opened, and the Flowers swept out; and thus they repeat the Operation with fresh Sulphur. And as they thus prepare the Flower of Sulphur in large Quantities, with little Labour and small Expence, hence it is usually sold but little dearer than rough Brimstone.

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The Sulphur by these Means is attenuated and purified; in other Respects it is not chang'd; but thus it becomes very fit for internal, medicinal Use. For when thus divided, it exerts its Virtues to greater Advantage in the Body; and thus, also, it proves fitter for external chyrurgical Uses, principally when it comes to be mixed with Balsams, Liniments, and Ointments. Hence we understand its wonderful Nature; for though ever so often sublimed, it always remains the same, without being changed or mixed: It therefore can never become a Metal, or enter the Composition of Metals. This therefore is not the Sulphur of the Philosophers, nor can never be made to afford it, as being no more than an Oil mixed with an Acid. So long as the Air is excluded from this Sulphur, heated even to the Degree of Fusion, it remains unchanged by the Fire; but as soon as the free Air is admitted, it presently takes Flame, and then soon changes, and divides into separate Parts. *Paracelsus* directs these Flowers to be sublimed from the red Calx of Vitriol, and recommends them for the Cure of exulcerated Lungs. I made the Experiment, but without finding that these Flowers, which he so much commends, had greater Virtues than the common Flower of Brimstone.

## THE ACID SPIRIT OF SULPHUR.

1. Chuse a cool, moist, still Day, and melt pure Flower of Brimstone, in an earthen, cylindrical Pan, three Inches deep, and as many over. When the Sulphur is thoroughly melted, but not fired, put the Vessel under a Chimney that does not smoke, but discharges all Fumes made upon the Hearth. Now light up the melted Brimstone, and immediately cover it with a glass Bell, the Center whereof is over the Center of the Flame. The Bell should first be suspended in the Vapour of hot Water, to moisten its internal Surface, and let it be so supported by Bricks, set triangularly, as not entirely to extinguish the Flame of the burning Brimstone; otherwise, the nearer it is to the Flame the better. As soon as the Flame begins to go out, let there be at hand another similar Vessel full of melted Brimstone, to be fired and applied as the former, and continue thus for a whole Day. A strong-smelling, acid Vapour, will begin to collect in the Bell, especially during the Coldness of the Night; apply a little Glass Receiver to the Bell, which is to be set to inclining, as that the Liquor may gently run out of it into the Receiver. Thus, by continuing the Operation, and increasing the Number of the Bells, there will be obtain'd a gratefully acid, ponderous, yellow, and sometimes red Liquor, that is wonderfully fixed at the Fire, so as to require almost the same Heat to raise it as Oil of Vitriol. It, also, strongly attracts Water; and therefore gradually increases its Weight in an open Glass. If all these Directions be well observed, the Operation will always succeed. The Vapour here must be carefully avoided.

2. Mr. *Homburg* finding this Method too tedious, has invented a much easier and better, whereby five Ounces may be obtain'd in twenty-four Hours. He took the most capacious Glass Receiver he could get, and cut a round Hole in the Bottom of it, eight or ten Inches wide. This is done by first finding the Centre of the Basis, by letting a Plumb Line fall down through the Mouth of the Glass till

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it touch the Bottom, and remain every way equidistant from the Sides; the Point of Contact is mark'd with a Diamond; then setting the Foot of a Pair of Compasses on that Point, and opening them to the Distance of five Inches, the Periphery of a Circle is struck with Ink. When the Line is dry it is to be cut with a Diamond, the deeper the better. Then have at hand an Iron-ring of the exact Size with the Circle drawn. When the Iron is heated, apply it to the round Line, and the Piece will fly off, and leave the Basis open. When the Bell is thus procured, paste a Slip of strong Linnen about the Neck, with a Loop-hole for a String to run thro', in order to suspend the Bell; then have ready a cylindrical earthen Pan, six Inches wide, full of pure melted Sulphur; light it, and set this Vessel upon a glazed earthen Foot, plac'd upon the rising Part in the middle of a large glazed Dish; suspend the Bell exactly over the middle of the Flame, at such a Distance as not to extinguish it. Make the Sulphur always burn equably, by adding fresh Supplies of it, and taking off the Crust with an Iron Rod, when it grows hard; so that the Distillation may thus proceed uninterrupted. The other Particulars abovementioned, of moistning the Inside of the Bell with a warm aqueous Vapour, of taking the Opportunity of a cold, moist, still Air, and of a Chimney that does not smoke, are here also to be regarded.

## REMARKS.

The Sulphur sublimed into Flowers is freed from its Earth and metallic Part. When lighted after being melted, it burns only on its Surface contiguous to the Air; its blue Flame consists of Fire, or the inflammable oily Part of the Sulphur, agitated by the Fire, and a mineral Acid, which is the other constituent Part of the Sulphur, now agitated, attenuated, made caustic and volatile, by the Flame. Thus the unctuous combustible Matter is consumed by the Fire, and the ponderous Acid dissipated, which soon after condenses by its own Weight, when it gets clear of the Flame that throws it off. Hence this Vapour becomes so mortal, because the violently caustic Acid, thus strongly agitated, comes in Contact with the Nerves, which move the Muscles, that join the Interstices of the cartilaginous Rings of the Larynx, Bronchia, and Vesiculæ of the Lungs, whence it contracts them spasmodically, so as to stimulate the Lungs into a panting Endeavour to cough, while they are entirely contracted, and not suffer'd to expand by the Weight of the Air; altho' the Breast be dilated with a laborious but fruitless Endeavour. The same Vapour, shut up with fermentable Liquors, stops Fermentation; and if strongly repeated, prevents Putrefaction, in all Bodies that otherwise easily putrefy. Hence this Fume is a proper Preservative against pestilential Poison, and the Contagion that flies abroad, or remains fixed in Goods, so as to infect them.

And hence we understand why the Flame of Nitre and Sulphur put together, but principally of Gunpowder, afford a very healthy Fume in the Height of the Plague; for the explosive acid Vapour of Nitre and Sulphur corrects the Air; and the same Vapour, if received in a small close pent-up Place, kills Insects. This Spirit of Sulphur, called by the Name of *Oilum Sulphuris per Campanam*, or Oil of Sulphur by the Bell, is no other than the Oil of Vitriol, which was lodg'd in the vitriolic *Pyrites*; and afterwards joining with the Oil of Coals, constitutes Sulphur. This appears from all kinds of Trials, pression, which is wanting in the Spirit of Sulphur prepared from the Flowers of Sulphur. The great *Homburg* has, with much Labour and Subtily, computed the Quantity of this Acid contained in Sulphur, and found it to be nearly a tenth Part. And thence, perhaps, we have the Reason why Alcohol will not touch Sulphur; that is, because its Oil is saturated with Acid: And again, why a tenth Part of Alkali, mix'd with it by the Fire, occasions Alcohol to dissolve it; because thus having Alkali to absorb the fix'd Acid, it leaves the Oil free to dissolve in the Alcohol: And again, why Sulphur resists Acids, and is not resolved thereby: Why when once dissolved with its own Acid, it admits no more: Why Metals melted or calcined with Sulphur, are corroded by it; that is, because the Acid of the Sulphur forsaking its own Oil, is strongly attracted into the Metals, and thus corrodes them into a kind of Vitriol. Hence let those less skillful Chymists grow more prudent, who endeavour to fix Sulphur; which is only a fossil Acid united with an inflammable Oil, and no longer attempt to fix metallic Mercury with it, for such heterogeneous Things cannot enter each other; nor can they give the Gravity and Solidity here so requisite, nor indeed the Simplicity or Malleability. This Spirit of Sulphur, being purified, barely by standing, then mix'd with Juleps, gives them an agreeable Acidity, and renders them a wholesome Drink in all Inflammations, and hot Diseases, attended

with



with thrift and Corruption. *Helmont* says it is conducive to the Prolongation of Life.

#### SULPHUR DISSOLVED IN FIXED ALCALI.

Take nine Drams of pure Flower of Sulphur, melt it in a Crucible, and add two Drams of dry fixed Alkali in Powder; the Sulphur will presently begin to change of a new and particular Odour, and of a high red Colour; stir the Mixture over the Fire with a Tobacco-pipe, then, when thoroughly melted and united, pour it out upon a cold Marble. It will be a red brittle Mass, soluble in Water, and soon resolving in the Air; whereas the Sulphur before would neither resolve by the Action of the Air or the Water.

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The fixed Alkali being here actuated by the Fire, intimately unites with the melted Sulphur, attracts its Acid, and joins therewith, so that the Sulphur resolves into its two separate Principles; yet the Oil does not here remain separate, but is intimately united with the Alkali, and acid Salt, so as immediately to produce a wonderful Soap, consisting of Acid, Alkali and Oil; and therefore the Combination of the fossil Acid, Alkali and Oil, in the Composition of Sulphur, changes the Oil to another Nature; but the Acid remaining almost unchanged, comes out the same upon the Resolution: And hence we may understand the Power of fixed Alkali in Metallurgy. Sulphur is often mixed with Metals, and makes them brittle; but, if fix'd Alkali be added to them in Fusion, it takes the Sulphur into itself, from the Metal; and floating upon the Surface, as a lighter Soap, leaves the heavier Metal, now freed from its Sulphur, to fall to the Bottom, in the Form of a Regulus, whilst the Alkali has no Entrance into, or Power upon the Metal. Hence, therefore, if there be any Doubt, whether any fossil Glebe or Ore contains Sulphur, the Way is to grind and melt it with fixed Alkali, for thus the Alkali will manifest the Sulphur by the Colour and Smell produced.

#### SULPHUR DISSOLVED IN VOLATILE ALCALI.

Mix any strong alkaline Spirit, whether prepared from Sal Ammoniac, Harts-horn, Blood, or the like, with pure Flowers of Sulphur; distil and cohobate, by which means the Sulphur will be dissolved; or if the Mixture be long kept in a close Vessel, and frequently shook, by this Method, also, a golden Tincture may be obtain'd.

#### R E M A R K S.

This Process serves to shew the Power which volatile Alkali has upon the acid of Sulphur, and the consequent Change thereof. But whether the Tincture possesses such great medicinal Virtues, especially in Diseases of the Breast, as an eminent Chymist imagined, may be justly questioned.

#### THE SOLUTION OF SULPHUR IN ALCOHOL.

Take Sulphur first opened by fixed Alkali, as in the last Process but one, and whilst it remains still hot from the Fire, and consequently dry, grind it fine in a hot and dry Mortar; put it into a dry Glass, and pour pure Alcohol thereon, so as to float five Inches above it. The Alcohol thus perfectly dissolves the Sulphur, as soon as it comes in Contact with it, into a rich, gold-colour'd, unctuous Liquor, which by shaking, becomes still richer. Let the Tincture be decanted clear from its Faeces, pour fresh Alcohol upon the Remainder, and this being again tinged, separate it, and repeat the Operation, till the Alcohol becomes tinged no longer. Keep all the Tinctures mixed together; they make a Liquor that has a very particular Smell, though not ungrateful, but with some Fragrance. It is of an exceeding aromatic heating Taste, and of a corresponding medicinal Virtue; the Faeces left behind are grey-coloured, saline and earthy.

#### R E M A R K S.

Alcohol will not touch native Sulphur, though ever so long digested therewith; but as soon as the Sulphur is opened by Alkali, it is then eagerly taken up by Alcohol; so that I scarce know any quicker Solution. Hence we learn the Power that Alkalies have upon Sulphur, for procuring Entrance to Alcohol. Sure, therefore, Sulphur frequently lies concealed in many fossil Glebes, but especially in Ores; whence it happens, that a simple Tincture of Sulphur has often been sold for the most secret and valuable metallic Tincture, even to Princes; and I remember a boasted Tincture

of Gold thus put off for *Aurum potabile* at a high Price. This Tincture was made by mixing Gold with crude Antimony, and the Alkali of Tartar, or *Glauber's* Alcahest, melted and stirred together; then the whole being afterwards bruised, and brought to Powder, it afforded a golden Tincture with Alcohol; but this, I say, was a mere Tincture of Sulphur; for the Gold here remains unchanged: But Antimony abounds with Sulphur, and in melting, the Alkali attracts this Sulphur, separates it from the metalline Mass, and opens it; then the Alcohol being added to the whole ground Mass, extracts only the sulphureous Part opened by the Alkali, and leaves the Gold, or metallic Part of the Antimony, perfectly untouched. This Observation is of infinite Use in examining numerous other sham Tinctures; for as soon as a skilful Artist knows that fixed Alkali is employed in making them, he knows they must proceed from Sulphur; because the metallic, or as the Chymists call it, the mercurial Part, is never touch'd by vegetable Alkali. In the mean time, our Tincture of Sulphur affords a wonderful warming Medicine, that causes Eructation, resists Acids, and cuts Phlegm; a few Drops of it being taken upon an empty Stomach, in Mead, *Spanish* Wine, or any proper Syrup, which it thus turns white, so as to be called the Milk of Sulphur. But I could never discover its antiphthical Virtue, as a last Refuge in ulcerated Lungs, though I have diligently sought for it; notwithstanding the great Doctor *Willis* has wonderfully recommended it in this Distemper; but I judge such Preparations should be more sparingly praised by Physicians.

#### THE SYRUP OF SULPHUR.

Take a Dram of Sulphur opened with Alkali; dilute it with thrice its Weight of Water, wherein it almost wholly dissolves; add to the Solution twice or thrice its Weight of Sugar, a little boiled; mix them together, and thus a kind of Syrup of Sulphur is prepared, containing the Virtue of the opened Sulphur, and may thus be conveniently employed for medicinal Uses. It is made more expeditiously by mixing the Tincture with six Times its Weight of the Syrup of Liqueurish, or the like Syrup.

#### R E M A R K S.

What Opinion Physicians should have of this Composition we hinted above, in considering the Tincture of Sulphur. The Syrup is heating, drying, and stimulating, which are Properties that do not suit Coughs and Consumptions; especially where the Body is worn down, and attended with constant Sweats. But hence we advantageously learn, how wonderfully the Powers of Fossils may be concealed in almost every Thing; for if any fossil Glebe, rich in Metals and Sulphur, be first gently washed, ground to Powder, calcined with fixed Alkali; and afterwards dissolved in Water, Syrup, Wine, Alcohol, or other Liquors, the alkaline sulphureous Part easily dissolves, and lies concealed. Whence the Liquor receives some particular Virtue, which should be carefully examined before the Liquor is used internally.

#### SULPHUR PRODUCED FROM OIL AND ACID.

Take four Ounces of pure rectified Oil of Turpentine, put it into a Retort, and let fall thereon by a Drop at a Time, an Ounce of highly rectified Oil of Vitriol; shake the Retort, after the Addition of each Drop, that it may be thoroughly mixed. The Liquor will now heat, smoke, grow red, and exhale a variable Odour. After the whole is thoroughly mix'd, digest it for eight Days; then apply a capacious Receiver, and distil in a Sand-furnace, the Juncture being well luted; a new and particular oily Liquor will come over. The Matter at the Bottom appears first like a fluid Bitumen, but gradually thickens, and at length becomes pitchy, and bituminous; the Liquor that comes over is fetid, sulphureous and suffocating, if received into the Lungs. If the Distillation be carefully carried through with successive Degrees of Fire, there will at length arise a true Sulphur into the Neck of the Retort, as may appear from its Form and manner of burning.

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Hence we learn the artificial Method of preparing Bitumen and Sulphur; and that the fix'd Acid of Vitriol, Alum, and burnt Sulphur, is the incombustible Basis of Sulphur, while the other Part is the combustible pure Oil; which two, by their intimate Union, compose Sulphur. If this factitious Sulphur be burnt, its oily Part affords a Flame without Smoke; and the other Part, in the burning, affords an acid, caustic, suffocating Vapour, which is preservative and ponderous, to



as not to rise high, and if condensed by a Glass Bell, it drops down into Oil of Vitriol, exactly like that of the natural Sulphur. A pure inflammable Oil seems to be collected in Sulphur, such as can scarce be otherwise obtained; whilst the gross, unflammable, terrestrious, or other saline Matter is excluded in this Combination; no other Acid, produced by Nature or Art, will make Sulphur by mixing with Oil. The Acid of Vitriol, wherever it be, or wherever subtly concealed, joins with any inflammable Oil so as to make Sulphur. Tartar of Vitriol, *Glauber's* Sal Mirabile of Sea-Salt, and of Nitre, the Salt of Vitriol, burnt Alum, and other Bodies containing this Acid, as often as they are, by Means of it, joined with an inflammable Oil, always afford true Sulphur. Hence this Acid alone has the Property of producing Sulphur, whilst all inflammable Oils serve therewith for the same Purpose; and hence Sulphur can never be produced where this Acid did not pre-exist; whence numerous obscure Particulars may be understood in the chymical History of Fossils and Metals; and, therefore, whoever would explain them, should remember what is here delivered. To give an Example from *Becher*; Melt *Glauber's* Sal Mirabile in the Fire, throw powdered Wood-Coals thereon, a sulphureous Flame arises, and a brown Mass is left at the Bottom, which being dissolved in Water, and precipitated, a true sulphureous Matter is obtained. Here it is plain, that the Oil of Vitriol in the Sal Mirabile lays hold of the inflammable Matter in the Coal, and becomes Sulphur; therefore, in determining the Effect of any chymical Operation before hand, we must carefully examine whether any of the Matters employed, either manifestly, or secretly, contain the Oil of Vitriol, Alum, or Sulphur, and whether any inflammable Matter is, also, applied; for in this Case, the Action of Sulphur is immediately produced.

#### SULPHUR OBTAINED FROM ALCOHOL AND ACID.

Into a tall Glass Body put eight Ounces of Alcohol, prepared without Alkali; let fall to it, by a Drop at a Time, highly rectify'd Oil of Vitriol; shake the Glass well after each Drop, and rest a little, otherwise a great Heat, and suffocating Vapour would arise; continue thus, by Degrees, till an Ounce of the Oil of Vitriol is added. The Mixture will have the sweet Fragrance of Southern-Wood, which will spread over the whole Place, but ought to be avoided, as being suffocating; if received in a small Quantity into the Lungs, it causes a violent Cough; and if received in a large Quantity, at once, I judge it might prove mortal: The Liquor will become reddish. Let it now be gently digested, in a close Vessel, for five Days; then distil it gently in Glasses close luted; a wonderful, subtle Spirit will come over, which proves incredibly suffocating, and is so much the more dangerous, as, by its grateful Smell, it treacherously leads one to take it in freely. Continue this gentle Distillation for some Time, till the mixed Matter grows black; then the Spirit which last came over will be exceeding sweet and fragrant; and now there will begin something acid to arise, which was not in the former Liquor; then change the Receiver, still keeping a gentle, but constant Fire, that the Liquor may rise slowly; for if the Fire was to be urged too strongly, but for a Moment, the Matter would immediately swell and rarity, so as to come over at once into the Vessels, and disturb the Operation. If the Distillation be thus gently continued, there arises an aqueous, fetid Liquor, and along with it another that is ponderous, pure, limpid, and keeping separate and unmixed with the Phlegm. After all this is come over, and about one Half of the Whole, again change the Receiver, and distil by Degrees of Fire, up to the highest; a fetid Liquor will arise, that does not mix with the former ponderous Kind; at the Bottom of the Vessel remains a black, brittle and unflammable Matter, though otherwise in some Degree approaching to Sulphur; so that by these Means we have three distinct Liquors arising from this Mixture, as, also, a suffocating Vapour, and a fixed *Caput Mortuum*, of a very particular Nature, remaining behind.

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The strongest Fossil Acid, by thus barely mixing with the most subtle vegetable Oil, or Alcohol, causes such a violent Heat, as, if imprudently mixed, almost to take Flame, and produce a considerable Effervescence. At the Instant of mixing, there arises a sweet Odour, which diffuses itself widely; but by a long Digestion, the disagreeable Odour of Garlick is produced. The sweet suffocating Odour is attended with an Acid. Here, 1. a spirituous, fragrant, suffocating, inflammable, and tartish Liquor is separated; whereas the Oil of Vitriol was a little before so fixed, and no way fragrant. 2. There comes over a fetid, sulphureous, aqueous, uninflam-

mable, acid Liquor, though neither the Alcohol nor Oil of Vitriol contain much Water. 3. There comes over a limpid, ponderous Liquor, that smells and tastes gratefully aromatic, but will not mix with the two former, yet dissolves in Alcohol, and then extracts somewhat of a Tincture from calcined Gold, and hence is esteem'd the philosophical Oil of Vitriol. It is certainly a dulcified Oil of Vitriol, concerning which *Isaac Hollandus*, *Gesner*, *Mr. Boyle*, but particularly *Dr. Hoffman*, may be consulted. The black Fæces being diluted with Water, return almost into acid Oil of Vitriol. We have here a great many unexpected Phenomena from a simple Combination; perhaps this may be the philosophical Spirit of Wine, which, by its Fragrance, calls in the Neighbours while it is made, according to *Lilly's* Account of it. Perhaps it is the dulcified, fragrant Spirit of Vitriol of *Paracelsus*, which he esteem'd powerful in the Falling Sickness; and possibly the Tincture prepared with it from Gold is a Species of *Paracelsus's* *Aurum Potabile*, digested in the Stomach of the Ostrich. Certainly this Operation may excite the truly Curious to examine with Care, whether there be any thing of these great Secrets concealed therein. We find it does not produce true Sulphur, but only certain Properties of it. *Boerhaave's Chymistry*.

As Sulphur cannot be resolved into its different Principles in close Vessels, the Distillation of it remained very imperfect, till *M. Homberg* completed it. His Method, as explained in the Memoirs of the Royal Academy of Sciences for the Year 1703, is this:

Take Flower of Brimstone, four Ounces; Oil of Turpentine, a Pound; digest them in a Matras over a Sand-heat for eight Days, till the Sulphur is dissolved, the Liquor appearing of a dark red Colour. Then, if the Solution be set in a cool Place, in a Vessel cooled by Art, about three Fourths will turn to yellowish Crystals, the other fourth Part remaining dissolved in the Liquor. The Crystals being separated from the Tincture, let a Pound of fresh Oil of Turpentine be poured upon them, and thus continue to repeat all the Parts of the Operation till the Flower of Sulphur be quite dissolved; mix all the Tinctures together, and distil them in a large Glass Retort over a gentle Fire; the greatest Part of the Oil of Turpentine will come over limpid, together with a small Portion of a whitish and very acid Liquor; but as soon as the Drops from the Neck of the Retort appear red, change the Receiver, and increase the Fire by Degrees, till nothing more will come over. Near the End of the Operation, a thick, brownish Oil will appear, mixed with a small Portion of a whitish, acid Liquor. In the Bottom of the Retort is found a black, rare, spongy Earth, or *Caput Mortuum*, in some Measure foliaceous, shining, insipid, and remaining fixed in the most vehement Degree of Fire. Let the thick, dark-coloured, and bituminous Oil be put into another Glass Retort, and when the Remains of the Oil of Turpentine, and of the white acid Liquor, are all drawn off by a very gentle Heat, red Drops will begin to rise; then immediately remove the Fire, and upon the bituminous Matter in the Retort pour rectify'd Spirit of Wine, which being drawn off again, in a gentle Heat, will have a very fetid Smell; pour fresh Spirit on the Remainder, and continue this Process till the Spirit that comes off has lost all its unpleasant Smell; and the black Matter which then remains in the Retort will Smell agreeably enough, and is the true bituminous and inflammable Part of Sulphur.

It is here to be observed, that only a certain Portion of this bituminous Substance is dissolvable in Spirit of Wine, another Part remaining which is soluble neither by that Spirit, nor by any lixivial Liquor, but only by essential distilled vegetable Oils. This indissoluble Substance is a strong Cathartic given in the Quantity of two or three Grains; but that Portion which yields to the Spirit of Wine is an excellent Balsam for the Lungs.

By this Analysis, three very different Substances are obtained from Sulphur, almost in equal Quantities, one acid, the second bituminous, and the third earthy and fixed. The acid Liquor is not different from Spirit of Vitriol, and when saturated with Salt of Tartar, is formed into Crystals like those of vitriolated Tartar. This Similitude of those two Liquors is farther confirmed by the artificial Production of Sulphur.

*Diagorides* informs us, that Sulphur is good in Coughs, when mixed with an Egg; and *Hippocrates* used it in hysterical Affections accompanied with Coughing, by way of Fumigation, sometimes alone, and sometimes mixed with other Substances. The internal Use of Sulphur is recommended by Physicians in Diseases of the Lungs, of which it is, by way of Eminence, termed the Balsam; because it promotes Expectoration, and clears and strengthens that Organ, and is therefore very beneficial in a Phthisis, Asthma, and Catarrh. It has in all Ages been a famous Medicine in cutaneous



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neous Diseases, Scabs, and Pforæ, used inwardly or outwardly. Externally applied, it discusses hard Tumors, ripens and digests Buboës; but no Medicine prepared with Sulphur is thought to be agreeable to Women with Child, because it is ready to cause Abortion. Inwardly taken, it is laxative, and promotes insensible Perspiration, as may be perceived by the sulphureous Smell of such Persons as have taken it, and by the brownish or black Colour which it gives to the Gold or Silver they carry about them. It is therefore very quickly and readily diffused through the whole Body, and, by its balsamic Parts, it blunts and entangles the acrid Salts, with which the Fluids abound in these Diseases; and thus resolves their native, mild, soft, and oily Qualities, by which Means it readily cures small Ulcers in the Lungs and Skin.

Though Sulphur may be given inwardly, even in a gross Powder, yet it is seldom ordered without some Preparation. It may be purified different Ways; some put it into Water with melted Wax, which swims at the Top while the Sulphur falls to the Bottom; and by repeating this Mixture till the Sulphur begins to acquire a red Colour, it is then thought to be more defecated. Some boil it in Water for several Days, changing the Water every now and then, and afterwards they set it for two Hours in hot Smoke, that some Fumes may exhale, and the remaining pale yellowish Sulphur they judge to be very pure. Others make Milks and Magisteries of Sulphur, which they think much preferable to common Sulphur; but all these Preparations either change the true Nature of Sulphur, or else are of no Effect at all. The best Way to purify it, is by Sublimation, or the Reduction of it to Flowers, by which common Method it is freed from the earthy or metallic Parts that may have been mixed with it. Sulphur thus prepared may be ordered in the Diseases already mentioned, in the following Manner:

Take Flower of Brimstone, four Ounces; Sugar of Roses, one Ounce; Syrup of Maiden-Hair, a sufficient Quantity to make a soft Opiate; of which three Drams, or half an Ounce, are to be taken every Morning fasting, and every Evening, at the greatest Distance between Meals, for a long Continuance of Time, in the Scabies and Asthma.

Take Flower of Brimstone, an Ounce; white Sugar, four Ounces; Rose-Water, a sufficient Quantity: Boil them according to Art, and make them into Tablets, or Lozenges; to be taken at a great Distance from Meals, in Coughs, Consumptions, and Asthmas.

Take Flower of Brimstone, two Drams; mix it well in a poched Egg, and swallow it early in the Morning fasting, and repeat it again in the Evening, for the Itch, rubbing the Body with the following Ointment:

Take the Roots of wild, sharp-pointed Dock, and Elecampane, of each two Ounces; fresh Butter, four Ounces; Flower of Brimstone, an Ounce and half: Mix them together, and make them into an Ointment.

As the powerful Acid contained in Sulphur is very prejudicial to the Lungs, Chymists, in order to make it a more safe, and equally efficacious Medicine, have endeavoured to mitigate or inviscate that acid Salt, by the Preparation called Balsam of Sulphur, for which, on any Quantity of Flower of Brimstone, they pour as much Oil of any Kind as will swim three or four Fingers Breadth above it, and then digest them in a gentle Sand-heat, till the Oil begins to look red or brown. This Liquor, when cold, is separated from the Faeces, and kept for Use. In this Manner are the different Balsams of Sulphur prepared; such as the *Balsamum Anisatum*, *Fœniculatum*, *Terebinthinatum*, *Juniperisatum*, *Succinatum*, so called from the different Oils used. The Dose is from ten Drops to thirty in Asthmas, immoderate Coughs, Ulcers in the Lungs, nephritic Pains, and Ulcers in the Kidneys, and Bladder. From this Balsam are prepared the balsamic Pills of *Morton*, which in slow, scorbutic, or scrophulous Phthisis, are attended with a very small Fever, if any at all; and where the expectorated Matter is glutinous, as in an Asthma, are very beneficial, both in the Beginnings and subsequent Stages of the Disease.

Take of Powder of Millepedes, three Drams; Gum Ammoniac, well purified, a Dram and an half; Benjamin Flowers, two Scruples; Extract of Saffron, and Balsam of *Perru*, each ten Grains; Terebinthinate Balsam of Sulphur, a sufficient Quantity: Mix and make them into Pills, which must either be gilt or rolled in

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Powder of Liquorish. The Dose is fifteen or eighteen Grains, to be repeated three Times a Day, at medicinal Hours.

But the best Balsam of Sulphur that has ever been prepared, is undoubtedly that of the great *Hamberg*, made by extracting a Tincture, with Spirit of Wine, from the bituminous Part of Sulphur, freed from all its acid and earthy Parts. This Tincture, evaporated over a gentle Fire to the Consistence of a Syrup, is the genuine Balsam of Sulphur; and of excellent Use, not only in Diseases of the Lungs, but in all Disorders in which the animal Functions are disturbed by acrid Salts in the Fluids. It is taken a few Drops at a Time, in any Syrup, or licked from the Palm of the Hand.

The Spirit of Sulphur is proper in burning, malignant, and pestilential Fevers. It quenches Thirst, prevents the Putrefaction of the Fluids, and calms the Effervescence of the Blood and Bile, not by coagulating the whole Mass of Fluids, as the other mineral, acid Liquors, but only by entangling the sulphureous Parts: For, according to *Borelli's* Observation, a Dram or two of Spirit of Sulphur, injected into the Jugular Vein of a Dog, did not kill the Animal; but the same Quantity of Aqua-fortis, even diluted with Water, throws a Dog into terrible Convulsions, of which he soon dies; and upon opening his Body, the whole Blood contained in the Veins and Heart is found in grumous Clots. Moreover, Spirit of Sulphur attenuates gross, vitiated Humours, and thereby often removes Obstructions; whence it is recommended by some in Asthmas: However, I do not think it proper in phthisical Cases, because, like other acid Liquors, it excites Coughing. It is given only in a few Drops at a Time, sufficient to give a grateful Acidity to any proper Vehicle; and by repeating this Dose at the Beginning of every Paroxysm, intermitting Fevers are often cured by it.

Spirit of Sulphur, either by itself, or mixed with Honey of Roses, cures simple Aphthæ in a very small Time, provided there be no Inflammation, by only touching these little Ulcers with the Spirit or Mixture, imbibed by a Bit of Cotton, or Linnen Rag. *Riverius* is of Opinion, that it is an excellent Remedy in putrid Fevers; and that it is found by Experience to cool, open, resist Putrefaction, prevent the Inflammability of the Fluids, and quench Thirst. But it is never to be given in Pleuritis, Peripneumonies, Spitting of Blood, Phthisis, and other Diseases of the Lungs, except the Obstruction arises from a thick, pituitous Matter, in Inflammations of the Stomach, Dysentery, bloody Urine, and Ulcers of the Kidneys and Bladder. *Geoffroy*.

SUMA. Tartar. *Rulandus*.

SUMACH. A Name for the *Rhus*; *folio Ulmi*.

SUMEN. The HYPOGASTRIUM.

SUMMITATES. The Tops of Plants.

SUPERBA. A Name for the *Caryophyllus*; *tennisfolius*; *plumarius*; *Floris pleno*, *purpurascens*.

SUPERBUS MUSCULUS. A Name for the *Elevator Oculi*.

SUPERCILIA. The Eye-brows.

SUPERCILIUM ACETABULI. The Margin of the ACETABULUM, which see.

SUPERCOMPOSITIVA SECTA. The Episyntetic Sect of Physicians among the Antients. See the Preface.

SUPEREXCRETIO. The same as HYPERCRISIS.

SUPERFICIES, in *Rulandus*, is the White of an Egg.

SUPERFŒTATIO. Superfœtation. See EPICYESIS.

SUPERGEMINALIS. The *Epididymis* is sometimes thus call'd.

SUPERGENUALIS. The PATELLA.

SUPERHUMERALIS. The same as EPOMIS.

SUPERIMPRÆGNATIO. The same as EPICYESIS.

SUPERLIGULA. The EPIGLOTTIS.

SUPERMONICUM. This is explain'd by *Dornicus*, Enigmatical.

SUPERPURGATIO. The same as HYPERCATHARSIS, which see.

SUPERSCAPULARIS SUPERIOR. A Name for the *Musculus SUPRASPINATUS*.

SUPERSCAPULARIS INFERIOR. A Name for the *Musculus INFRASPINATUS*.

SUPERVACUATIO. The same as HYPERCRISIS.

SUPIM. The Name of a *Chinese* pomiferous Tree, of no Use in Medicine, that I know of.

SUPINATOR LONGUS, SIVE MAJOR.

This is a long, flat Muscle, lying on the external Condyle of the Os Humeri, and on the convex Side of the Radius, from one End to the other.



It is fix'd by fleshy Fibres to the external inter muscular Ligament, and to the Crista of the external Condyle of the *Os Humeri*, for five or six Fingers Breadth above the Condyle, between the *Brachialis* and *Anconaeus Externus*; from thence it runs along the whole convex Side of the Radius, and is inserted by a flat, narrow Tendon, a little above the Styloide-Apophysis in the Angle between the concave and flat Sides of the Extremity of this Bone.

The *Supinator Longus* was believed to be concerned only in the Motion of Supination, till *Heister* very justly observed that it was, also, a Flexor of the Fore-arm: And indeed, a very small Degree of Attention to its Insertions and Situation, must convince us, that it is much better fitted for this last Use than for the first; for before it can act as a Supinator, the Hand must be in the greatest Degree of Pronation; and even then, it can do little more than bring the Radius back to its natural Situation, without compleating the Supination, excepting it be by Jerks. It would, therefore, be much more properly named *Radialis Longus*, than *Supinator Longus*.

This Muscle may bend the Fore-arm, by Means of the Connexion the Radius with the Ulna, in several different Situations; that is, when the Fore-arm is fully extended, the Radius being either in a Motion of Pronation or Supination, or in a middle Situation between both.

On this Occasion it is proper to observe, that the Method of examining the Uses of the Muscles on 'dead Bodies, by pulling them in order to move the Bones in which they are inserted, is very uncertain, except particular Care be taken to pull them in their true natural Direction, which is often different from what it appears to be when they are dissected, by reason of the lateral Connections, and *Præna*.

Supination performed when the Fore-arm is fully extended, is commonly attributed, in part, to the Rotation of the *Os Humeri*, by Means of its Articulation with the Scapula, as if this Supination, when the Fore-arm is extended, were greater than when it is bent; whereas the Difference in Supination is really but very small, though it be very considerable in the Motions of Pronation.

#### SUPINATOR BREVIS, SIVE MINOR.

This is a small, thin, fleshy Muscle, surrounding a great Portion of the upper third Part of the Radius.

It is fixed by one End to the lower Part of the external Condyle of the *Os Humeri*, to the external lateral Ligament of the Joint, to the annular Ligament of the Radius, and to Part of the lateral Eminence in the Head of the Ulna.

From thence it passes obliquely over the Head of the Radius, covering some Part of it, and running down upon, and in some Measure surrounding the Neck, it turns in under the bicipital Tuberosity, and is inserted by the Side of the inter-osseous Ligament in the Inside of the superior Quarter of the Bone, and even a little lower. In some Subjects we may observe the Marks of the Passage of this Muscle over the Outside of the Bone. It makes an Angle with the *Pronator Teres*, resembling the *Roman V*.

The *Supinator Brevis* seems to have no other Use than what is expressed by its Name; and as it is a short, small Muscle, it must be very weak. Its Use is principally owing to the Obliquity of its Fibres; but still neither this nor the former Muscle would be able to perform Supination, where a great Force is required, without the Assistance of the Biceps, which is the most powerful of all the Supinators, and the principal Actor in this Motion. *Winflow's Anat.*

SUPPEDANEA, or SUPPLANTALIA. Topical Medicines apply'd to the Feet.

#### SUPPOSITORIUM.

A Suppository, is a Kind of medicated Cone, or Ball, which is introduced into the Anus for opening the Belly. Suppositories are usually made of Soap, Sugar, Allum, or a Piece of Tallow-Candle, about the Length of a Thumb, and the Breadth of a Finger; though they may be made smaller for Children, and sometimes a little thicker for Adults. Suppositories are sometimes compounded of Ingredients adapted to the Disease, and Circumstances of the Patient, as of Honey, Salt, Powder of Aloes, Colocynthis, and the like. If one Suppository does not occasion a Stool, it must be supplied by a stronger; and if that does not succeed, the Repetition must be continued till the Effect required is produced. They are sometimes lubricated with Oil or Butter, that they may be introduced with greater Ease. Some use a Lozenge of Sugar, or a small Piece of thin Linnen Cloth rolled up, with a little hard, salt Butter, which greatly loosens the Belly. For Ulcers of the Rectum, the best Suppositories are made of Honey of Roses, Powder of Mastic and Myrrh, or of Colophony. The stronger Suppositories, which are composed of acrid and stimulating

Ingredients, are advantageously used in promoting a difficult Birth, if the Infant be in a natural Position, and, also, for expelling the Secundines, when they are tenaciously retained in the Uterus. In exhibiting them, the Patient should be put in the same Posture as in giving a Clyster, and the Suppository must be gently thrust up the Anus with the Finger.

SUPPRESSIO. A Suppression, or Retention; it is generally us'd relative to Urine, or the *Menses*.

SUPPRESSIONIS IGNIS. A Fire of Suppression, in Chymistry, is, when the Vessel containing the Ingredients to be acted upon is covered with Sand, upon which live Coals are laid, so that the Matter contain'd in the Vessel may be acted upon both from below and above.

SUPPURANTIA. Suppurative Medicines.

#### SUPPURATIO.

If an Inflammation, by Neglect, too late Use, or ill Success of the Methods, directed under the Article INFLAMMATIO, tends to a Suppuration, and it appears so to do by the Signs there given, the Indications will be,

1. To maturate the crude Humour, as soon as may be, into one similar Substance.

2. To mollify the same, with the adjacent Parts.

3. To attract it outwards.

4. To procure a Vent for the concocted Pus.

5. To mundify the Place.

6. To manage the rest of the Cure as a Wound.

An Abscess, ἀπόρροια, ἀπόστημα, *Abscessus*, with the antient Physicians, had various Significations. *Hippocrates, Epidem.*

1. gives that Name to the Change of one Disease into another, when he says, ἐξ ἄλλων πυρίων καὶ νοσημάτων ἀποσάσεις ἐν τῇ ἀσθενείᾳ ἐγίνοντο; "Of other Fevers and Diseases there was a

"Mutation into Quartans". The Name *Abscess* was, also, given to those Efforts of human Nature, by which some noxious Matter was separated from the Blood, and either discharged from the Body, or deposited on some Part. The Antients, therefore, divided these Kinds of *Abscesses* into such as were form'd, καὶ ἔκρη, "by Efflux", [See *ECROE*] and those which were form'd, καὶ ἀπόθεσις, "by Deposition."

*Galen. 1. Com. 2. in 1 Epid.* Thus, for Example, in a Peripneumony, the Matter of the Disease is observed to find a Vent by Spitting, by a bilious Flux of the Belly, or by Plenty of thick Urine with much Sediment, and in these Circumstances there is an *Abscess* by an *Efflux*. But where

there is no such Excretion, and yet from the salutary Signs which appear, we can predict the Recovery of the Patient, we are directed by *Hippocrates, Lib. Prognost.* to expect an *Abscess*, either at the Ears, or towards the inferior Parts of the Body, the Matter of the Disease being deposited in those Parts. But at present we understand by an *Abscess*, according

to the common and received Sense of the Word, the Transfusion of an Inflammation into a Suppuration, and a Collection of Pus thence generated in some Part of the Body. In this Sense is an *Abscess* defined by *Galen, M. M. ad Glauc. Lib. 2. Cap. 21*,

"An Affection in which Bodies that were before in mutual Contact, secede from one another.

"Hence it is necessary that some void Space should be left

"in the Middle, which will contain some flatulent or hu-

"mid Matter, or a Mixture of both. Some Inflammations,

"and many erysipelatous and phlegmonoide Tumors are

"changed into an Abscess." For while the obstructed Ex-

tremities of the inflamed Vessels are separated by the Force

of the vital Fluid, which presses on them behind, they be-

come intermingled with the effused Humours, and being che-

riched by the Heat of the Place, pass into Pus, which by

removing at a Distance from one another the Parts which

were before contiguous, makes Room for itself. But since a

true Phlegmon almost constantly resides in the Panniculus

Adiposus, this Membrane, which easily gives Way, may by

a Collection of Pus be sometimes distended into a very great

Tumor. Now, that such a preternatural Cavity is formed

by a Collection of Pus, after the Phlegmon has been suppu-

rated, which did not exist before, is demonstrated, in that if

you make an Incision with a Lancet into the inflamed Part,

before the Pus be generated, there will be an Eruption either

of Blood, or some thinner, Ichorous Fluid, and the whole

Tumor appears solid: But if the Incision be made after Sup-

uration, there appears a manifest Cavity after the Effusion

of the Pus, occasion'd by a Secession of the Parts which were

before contiguous.

The best Cure of an Inflammation, is undoubtedly by Re-

solution; but when this is out of the Power of the Physician

or Surgeon to effect, as is frequently the Case, there remains

nothing but Suppuration, since other Mutations or Conse-

quences of an Inflammation, which are either a Gangrene

or Scirrhus, are much worse. If, therefore, from the Signs

enumerated under the Article INFLAMMATIO, it appears



that the Inflammation is of such a Nature, that a Resolution cannot reasonably be expected; or though perhaps there were some Hopes in the Beginning, that the same might be effected; yet through unsuccessful Application, or Neglect, or too late Use of proper Remedies, (after the Impetus of the vital Liquid, by a continued Pressure for several Days together, has consolidated the obstructing Molecules, and rendered them quite irresoluble by expressing the most fluid Parts) all Expectations of a Resolution are absolutely vain and fruitless; the curative Indications are to be directed in such a Manner, that by forming a Suppuration as soon as possible, all the Parts, both in the Fluids and Solids, which are corrupted by the Inflammation to such a Degree that they can no longer be subservient to the Laws of Health, may be removed out of the Way; and this being effected, that afterwards the lost Substance may be restored, and the separated Particles be reunited and restored to their natural Cohesions.

1. The material Cause of the Disease, as long as it continues in such a Disposition as qualifies it for causing or increasing the Disorder, is called *crude*; but when by the vital Forces, its own Nature, or proper Medicines, it becomes changed in such a Manner as to be more conformable to the Laws of Health, and less injurious to the natural Functions, it is termed *concocted*; and that State of the Disease, in which this material Cause is so alter'd as to be less pernicious, is called *Maturation*, or *Concoction*. Now this *Crudeness* may take Place as well in the Fluids as Solids, and consequently the same may be said of *Maturation*. In a Phlegmon we bestow the Epithet *crude* on all Matter which so obstructs as to be incapable of Resolution, and every Vessel so obstructed that it cannot be open'd, comes under the same Denomination. In order, therefore, to the Restitution of Health, this obstructed Vessel, together with its contained stagnant Matter, must be separated from the other quick and pervious Vessels, and with the effused Liquids be changed into one homogeneous Humour called *Pus*. As long, therefore, as the Cohesion of the obstructed Extremity, with the other Parts of the Vessel which are pervious, remains undissolved, the vital Force acting upon the Place obstructed, causes an Increase of all the Symptoms of the Inflammation; but when a Separation is effected, and a free Passage is opened for the Humours through the dilacerated Extremity of the Vessels, it is very reasonable to conclude, that all these bad Symptoms must be very much diminished. A *Crudeness*, therefore, is known by the Increase or Height of all the Symptoms; and *Maturation*, on the contrary, by their Remission. We have an elegant Description of the whole Affair in *Celsus*, *Lib. 5. Cap. 28.* where treating of Abscesses, he says, "*Crude* is what has in it, as it were, a great Motion of the Veins, attended with a Weight, Heat, Distention, Pain, Redness and Hardness; and if the Abscess be considerably large, there is a Horror, with a slight continual Fever; but if the Suppuration be deeply seated, instead of those Symptoms which otherwise appear on the Skin, the Patient is molested with pungent Sensations. When there is a Remission of the beforemention'd Symptoms, and the Place itches, and becomes whitish, or somewhat livid, the Suppuration is matured."

2. The Hardness and Resistance of the inflamed Part proceeds from the close Compactness of the Liquids and Solids. [See INFLAMMATIO] and while these continue, the Disease is justly said to be *crude*. But *Maturation* requires a Separation of the obstructed Extremities from the other Parts of the Vessels. The more, therefore, the Parts are soften'd, and, as it were, withered, the sooner, and with the less Pain, may this Separation be effected. But if the Part be affected with a violent Phlegmon, it is generally observed, that though the Middle of the diseased Place begins to soften, all the circumjacent Parts retain their Hardness, for which Reason they are to be treated with the like Emollients, as *Celsus* advises us in the Chapter before quoted, where he says, "If the Parts about the Phlegmon are harder than ordinary, they are to be mollify'd with Fomentations of bruised Mallows, or Seed of Fenugreek, or Linseed, boiled in *Passim*."

3. If the Pus generated from the Suppuration of the inflamed Part settles about the Superficies of the Body under the Skin, there is generally a spontaneous Elevation of the Skin into a Tumor, especially if the Place be treated with mollifying and relaxing Medicines: But if the Pus should have a deeper Seat, the Danger is the greater, lest it should have Sinuses in the Panniculus Adiposus; or if it be latent in the interior Parts, it is to be feared that it will communicate a purulent Contagion to the Viscera. As soon therefore, as by the Signs described under the Article INFLAMMATIO, it appears that the Inflammation tends to a Suppu-

ration, we are to try all Methods for deriving the Pus to the exterior Parts. *Celsus*, *Lib. 4. Cap. 6.* treating of the Cure of a Pleurisy, for a violent and recent Pain commends Bleeding; but if that proves useless, or is administer'd too late, he bids us have "Recourse to Cupping or Scarification: A Sinapism, also, prepared with Vinegar, may properly be applied to the Breast, till it raises a Blister, to which a proper Medicine is to be afterwards apply'd, in order to attract the Humours to the Place." And speaking of a Peripneumony, *ibid. Cap. 7.* when arriv'd at its Height, he says, "It may be of Service to apply to the Breast Salt, pounded very small, and mix'd with Cerate, because it slightly corrodes the Skin, and diverts the Impetus of the Matter which infects the Lungs to the exterior Parts. It may be of good Use, also, to apply a Malagma, of that Kind which operates by Drawing." If the Pus now totally formed can be conveniently attracted to the exterior Parts, the Event of the Inflammation is not so much to be dreaded: For even in a suppurated Pleurisy, for Instance, the Patient dies either of a Suffocation from a Compression of the Lungs by the Ulcer turgid with Pus, and prominent towards the interior Parts, or of a Rupture of the same Ulcer discharging its Pus into the Cavity of the Thorax, the Consequences of which are an Empyema, Phthisis, and Death. But if the Impostume generated in the intercostal Parts tends towards the superficial Parts, and there rises into a Tumor, an Incision being made therein, and the Pus evacuated, the Patient generally recovers. With this View the ancient Physicians irritated the external Parts with stimulating Medicines, or treated them with highly mollifying Cataplasms or Fomentations, in order to divert the Impetus of the Disease towards the exterior Parts.

4. When the Extremities of the obstructed Vessels, with the stagnant Blood contained in them, by Means of Heat, a Mixture of Humours, and long Settlement in a close Place, are chang'd into a pinguious, white, and homogeneous Liquor, a matured Pus is then said to be form'd. By what Signs we may know the Presence of such a Pus, shall be declared hereafter: But when the Pus is too long confined within this close and hot Place, it grows by Degrees thinner, and at the same Time more acrimonious; and as the small resorbent Veins expand their open Orifices in all the Superficies of the Cavity in which the Pus is contained, they will absorb the same, and, by transmitting it to be mixed with the Mass of Blood, induce a purulent Cacochymy, the Consequence of which may be a hectic Fever and Phthisis. Besides, the Pus being render'd more acrimonious, will much injure the whole Superficies of the Place in which it is contained; and being at the same Time attenuated, will very easily find Ways for itself into the Panniculus Adiposus, the Consequences of which are often very bad Sinuses and Fistulas, which are all owing to a Neglect of procuring in Season a proper Outlet for the concocted Pus. Hence, also, we clearly understand the Difference between the Resolution of an Inflammation, and the Cure of it by a Suppuration: For in the Resolution of the Inflammation, the Matter of the Disease is, by Means of the vital Forces and proper Remedies, alter'd in such a Manner, as to become very like what is of a laudable and wholesome Substance, and qualified for Circulation through the Vessels with the other Humours, without injuring the Functions; so that in this Case no Evacuation is required. But when by Means of Suppuration there happens a Separation of those Fluids and Solids which were corrupted by the Inflammation, they are converted into a mild Pus, though quite different from the Nature of our Humours; for which Reason, when mixed with them, it creates Disorders every where, and excites Fevers, until it be evacuated from the Body, or secreted from the Blood by a Translocation, and deposited in some Part of the Body, whence it must again be expelled before a Cure can be effected. It appears, then, that an Evacuation of the concocted Pus is required, and that in a speedy Manner, since the longer it stays, the more acrimonious it becomes. What great Mischiefs and Disorders arise from too long a Detention of Pus in an Abscess, we learn from the Observations of Physicians. A Virgin, forty Years old, had her left parotid Gland suppurated; and on the fourteenth Day of the Disease, the Abscess there generated was elevated to the Bigness of one's Fist. And though in the Beginning of the Disorder the Patient was free from a Fever, and took Care of domestic Affairs, yet at last, for want of a due and seasonable Discharge of the Pus, she was seized with a Fever, attended with very bad Symptoms, as Fainting, Nausea, Watchings, and other pernicious Concomitants, which in a few Days put an End to her Life. The Abscess, indeed, broke of itself a few Days before her Death, but little or no Pus flow'd out of it. *Hidden. Obs. Chirurg.*



*Chirurg. Cent. 1. Obs. 39.* A Child of three Months old had an Abscess upon its right Shoulder, and the Parents not suffering an Incision to be made in the Place, the Tumor began to subside of itself; but the Pus being resorbed, was translated to the Pudenda, where it caused a mortal Gangrene of these Parts. *Ibid. Obs. 81.* Numbers of the like Observations occur in Authors, which shew how dangerous it is to suffer matured Pus to continue long inclosed in a Vomica.

5. As long as the suppurated Place remains closed, it is called a *Closed Vomica*; but after an Outlet, whether spontaneously or by Art, is procured for the Pus, it is called an *Open Vomica*. But the whole Superficies of the Cavity which contained the Pus, was macerated in the same; whence it must of Necessity have been more or less injur'd by it, especially if the Pus were by Delay and Heat rendered considerably acrimonious. An Union, therefore, and Consolidation of the separated Parts, or a Restitution of these which are destroy'd, can never be accomplished before all that Superficies be reduced to the Condition of a pure Wound; and therefore, the half mortify'd Extremities of the Vessels, with the half-corrupted Parts of the Panniculus Adiposus, must be separated, and every Thing else be done which is requir'd in Wounds. [See the Article VULNUS.] "Ulcers, says *Hippocrates, Lib. de Ulcer.* before they are cleansed will not unite, though their Lips are brought together; nor will they admit of a spontaneous Coalition. Ulcers, also, whose circumjacent Parts are inflamed, can never unite as long as the Inflammation continues. Or if the Parts surrounding the Ulcers appear black, or if there be any putrify'd Blood, or a *Varix* supplying an Influx of Blood into the Place, in such Cases there can be no Coalition before the circumjacent Parts of the Ulcer are made whole and sound."

6. After Depuration, the Ulcer passes into the Nature of a pure Wound, but with Loss of Substance; and therefore a Regeneration of what is lost, and a Re-union of what is separated, are next to be procured.

Maturation is effected by the Application of such Medicines as,

1. Increase Motion in the Part affected, by cherishing, stimulating, heating, communicating Heat actually or virtually; they have the like Effect on the whole Body, exciting a slight Fever.

All Maturation of an inflammatory Crude Matter into coagulated Pus, must be effected by Means of the vital Forces; for soon as these fail or languish, the Formation of Pus is observ'd to cease. And therefore *Hippocrates, Lib. de Ulcer.* enumerates among the Signs of Death the Exsiccation or Drying up an Ulcer, whether generated before, or during the Time of Sicknes: And in the last Stage of a Pthisis, the Spit is diminished, and frequently even ceases, for the like Reason. Now, the vital Force is estimated by the Circulation of the Fluids through the Vessels. Since then the Extremities of the obstructed Vessels are to be separated, together with their stagnant Contents, by the Force of the Fluid pressing upon them forward, the speediest Way of effecting this must be by augmenting the Strength and Celerity of the Motion of the Fluids through the Vessels in the Part which requires Suppuration; for in that Case, the Fluid projected through the Vessels will, within a given Time, act upon the obstructed Extremities with stronger and oftener repeated Strokes, and by that Means destroy their Cohesion. Hence an increased Motion is mention'd under the Article INFLAMMATIO as one Condition requir'd to cause a Tendency in a Phlegmon to Suppuration. It is, however, to be observed, that too swift a Motion of the Liquids through the Vessels causes a sudden Rupture of the Capillaries, instead of a gradual Separation; the Consequence of which is a Gangrene, instead of a laudable Suppuration. A just Moderation, therefore, is requir'd, so as that the Motion in the Part be greater indeed than in a State of Health, and yet not excessive. Now, the Heat of the inflamed Part, if it be on the Superficies of the Body, or the Fever, in a greater or lesser Degree, if the Disease have a deeper Seat, will discover whether the Motion ought to be increased or diminished. If the Motion be too slow or languid, it is to be quicken'd and increased, either by the Application of Topics to the Parts affected, or by internal Remedies.

We have observed under INFLAMMATIO, that a Phlegmon is attended with a Fever, either universal or partial, and therefore the Motion is to be increased in the inflamed Part alone, if it be possible, or in the whole System by exciting a slight kind of Fever. Thus we see in a Pthisis, where Pus

is generated every Day, that the Patient is never free from a slow hectic Fever, which is exasperated while the Pus is generating; but diminished during the Expectoration of the same when generated; and therefore it is said by *Hippocrates*, in the Place quoted under INFLAMMATIO, "That Pains and Fevers are more incident about the Time of the Generation of Pus, than after it is generated." Things qualify'd for answering the aforesaid Intention, are the aromatic Gums, Ammoniac, Galbanum, Opopanax, and the rest; in all which there is a moderate Stimulus, and at the same time a good measure of Tenacity, by which they adhere to the Part to which they are applied. And thus by confining their very subtil Exhalations, they cherish the Part as it were in a Vapour-Bath of their own Creation; and, at the same time, by relaxing the Vessels, insinuate their stimulating Aromatic Principle; which is the Reason why such Remedies are of extraordinary Efficacy in all Inflammations, where, on account of too languid a Motion, we are apprehensive of a Scirrhus. All these Medicines, also, which thus by a gentle Stimulus excite a greater Motion in the affected Part, are at the same time virtually or potentially heating, because a greater Heat is the Consequence of an increased Motion of the Fluids through the Vessels, as is demonstrated under the Article INFLAMMATIO. Those Medicines, also, are very serviceable, which are actually hot, provided their Heat be not so intense, as by dissipating the most fluid Part, to convert the rest into a scirrhous Hardness. The best Heat then, in this Case, is of a humid kind, as when Fomentations and Cataplasms are applied wrapt up in heated woollen Cloths, or the like, by which means the affected Part is fomented and cherished with a continual tho' gentle Heat. For, "A hot Suppuratory, tho' not in all Ulcers, is a very good Sign of a safe State, for it softens the Skin, attenuates, and mitigates Pain," *Hippocrat. 5. Aph. 22.* with other good Effects. Why he says, "Not in all Ulcers," is explain'd by *Galen* in his Comment on this Aphorism, where he says that Heat is prejudicial to putrid and rheumatic Ulcers, by increasing the Putrefaction, and attracting Defluxions.

2. Maturation is promoted by the Application of such Remedies as restrain the excited Motion and Heat to the Place affected, by glutinous emplastic Substances, which prevent too great an Exhalation and Dissipation, and by Lenitives correcting an Excess of Acrimony.

The inflamed Place is always hotter than it is usually in a State of Health; and since all the Symptoms of an Inflammation are increased, when it tends to a Suppuration, the Heat must be so too before the Abscess be formed. But by an Increase of Heat the most liquid Part of our Humours is dissipated, whence it must be highly beneficial to apply such Things as cherish the Part affected by a continual Humectation, and restore what is dissipated by the increased Heat. Hence those Remedies must be of extraordinary Service, which are able to retain a large Quantity of Water, and will not easily part with it. But such is the Nature of all glutinous Things, which with Water will form themselves into a ductile Paste, as will all farinaceous Substances, and particularly the Meal of Linseed, which will absorb a vast Quantity of Water. Of Things of the like Nature are formed highly emollient Cataplasms, of which there are various *Formulae*. And if the Place which requires Suppuration be kept Night and Day well wrapt up in them after the Manner prescribed, especially if Care be taken that they may be always warm, all Inflammations which will not admit of Resolution, are generally speedily enough matured, and converted into good Pus. And since all these Remedies have, besides their moistening Quality, an emollient Virtue, and relax the solid Parts of the Body, they must in an extraordinary measure mitigate the Pain which attends the Suppuration, and is generally pretty sharp; and besides exert their lenient Virtue, by inviscating and obtunding all manner of Acrimony; in which last respect they are of Service, because a mild Disposition of the Humours is requir'd in order to a Suppuration, as we have observ'd under INFLAMMATIO. And since there is great Danger here of a Degeneracy into a Putrefaction, on account of a Stagnation of the Fluids in the obstructed Vessels contiguous to the others, and the increased Heat, for this Reason we take care to select such Topics, as by the Heat of the Part to which they are applied are in a short time so alter'd, as to become of a Nature quite opposite to Putrefaction, or to acquire an acescent Quality. With this View our Surgeons add to their maturing Cataplasms the Meal of Rye, which very soon becomes acescent, Vinegar itself, Sorrel and the like. They, also, use to add fresh Butter, Oil of Linseed, or the like remarkably



markably soft and pinguous Substances; partly because by obstructing the Pores of the Skin, they prevent the Dissipation of the Humid; and partly, because, by these Additions, they take care that those Cataplasms shall not become too soon dry.

Suppuratives, or Remedies effecting a Maturation into Pus, are,

1. Simple aromatic Gums, such as Gum Ammoniac, Bdelium, Elemi, Galbanum, Opopanax, Sagapenum.
2. Emollients, Relaxers, Moisteners.

*Formulae* to these Purposes occur under the Article **ABSCCESSUS**.

3. A third Means of promoting Maturation is, by moderating the Motion and Temperament of the whole vital Fluid, in such a manner, as that it may neither be too sluggish, nor too much exalted.

This Rule is of the greatest Importance in the Practice of Medicine, with respect to the Cure of internal as well as external Diseases. The accelerated Motion of the Humours causes a Tendency of the Phlegmon to a Suppuration; but too great a Degree of Acceleration, by suddenly destroying the very tender Contexture of the capillary Vessels, produces a Gangrene; as, on the contrary, a sedate and moderate Motion is what takes place in the Resolution of an Inflammation. While there are Hopes, then, of a Resolution, the Physician makes no Scruple of checking the Impetus of the vital Liquid, by such Remedies as have been mentioned under the Article **INFLAMMATIO**, in order to prevent any farther Injury of the inflamed Vessels. But when he perceives by undoubted Signs that a Resolution is impracticable, he knows that a greater Degree of Motion is always requir'd than is natural in a State of Health, for separating the obstructed Extremities of the Vessels, and converting them, with the extravasated Humours, into good and laudable Pus; and is therefore sensible, that such Methods as give too great a Check to the Impetus of the Circulation may oftentimes be prejudicial. In this Case, therefore, either by means of internal Remedies, or the Application of Topics, we are to endeavour such a Regulation of the Circulation of the Humors through the Vessels, as will produce in the Place which is to be suppurated a greater Heat and quicker Motion than is consistent with a State of Health, but not in so intense a Degree as by a sudden Destruction of the minute Vessels, wholly to deprive the Part of the Influx of the vital Humours, and by that means induce a Gangrene. And such a Regulation is known to be made, if the Heat in the Part inflamed exceeds that in Health, but not much; if there be a Pain, but not intense; if a moderate Pulsation may be perceived; and if the Tumor, Redness, and other Symptoms of an Inflammation increase indeed, tho' but slowly and by due Degrees. The Signs, then, which are afforded by the very Part affected, indicate whether the Motion of the vital Fluid is to be augmented or diminished. But when the Inflammation is so very considerable as to disorder the whole Body, in such a Case the Greatness of the Fever, the Thirst, with the Dryness of the Tongue, are plain Indications of what ought to be done, in order to obtain that just Regulation which is requir'd. Now there is no universal Suppurative; but different Remedies are necessary, in proportion as the Motion of the Humours is to be increased or diminished. For a hot and juvenile Constitution, a Cataplasma composed of Oatmeal, Milk and fresh Butter, will be proper to be applied to the Place which is to be suppurated; for the Melancholic, Aged, and Persons of a cold Temperament, Bulbs of Onions roasted under the Ashes, Galbanum, Gum Ammoniac, and the like Stimulants are added, that by quickning, in some measure, the Motion of the Fluids, the Suppuration may succeed the better, and a Scirrhus be avoided, which otherwise often happens in such a Circumstance, if the Inflammation seizes the glandulous Parts of the Body. The same Regulations are to be observed in internal Inflammations. Thus in the Beginning of a Pleurisy, Bleeding boldly administer'd, even to fainting, often removes the Disease; but when, for want of timely Assistance, the Physician perceives that the Cure cannot be effected by a Resolution, he knows that the only Way left for a Recovery is by a Concoction of the morbid Matter, and an Evacuation of the same when concocted by Spitting, Urine, or other Ways, or a Conversion of it into an Abscess. But to attempt a Cure, in such a Circumstance, by Venesection, or other Evacuants, which must of Necessity highly weaken the vital Force, cannot but prove to the Deriment of the Patient, since the Case requires a moderate Fever for the Maturation of the crude inflammatory Matter.

The Use of the Decoction under the Title of *A thin aromatic Liquor to be drank warm*, found under the Article **INFLAMMATIO**, will answer the Intention of exciting a sufficient Motion.

4. The Intention of Maturation is answered by keeping the Place closed, till all the inflamed irrefoluble Matter be suppurated; and this is a fourth Method, which, with those before prescribed, will not fail of procuring good and laudable Pus in the Part affected.

It often happens in a large Abscess, that the Middle becomes soft and yielding to the Touch, when the greatest Part of the inflamed Tumor, which lies more remote from the Center, continues hard. But because many Disorders are consequent on keeping the Place too long closed, after the Generation of the Pus, the Surgeon is therefore often intent on opening such Tumors as soon as he perceives the least Fluctuation. But all the pernicious Consequences observed to proceed from a delayed Evacuation of the Pus depend on the Putrefaction and Acrimony which it acquires by long Continuance, whence, as it increases in Quantity, it works out Passages for itself into the *Panniculus Adiposus*, and produces Sinuses and Fistulas; or being attenuated, is absorb'd by the bibulous venous Vessels, and by this means infects the Blood with a purulent Cacochymy; or, lastly, having its thinner Part dissipated, the rest is condensed, and forms scirrhous Tumors, especially about the glandulous Parts. But as long as the Place remains closed, and the Air has no Access to it, there can be no sudden Degeneracy into a Putrefaction; and while the Pus is contain'd in a Cavity whose circumambient Parts are all hard, it will not easily insinuate itself into the *Panniculus Adiposus*; nor will there be any great Fear of a Resorption of the attenuated Pus, since the arterial Vessels, which are distended by the inflammatory irrefoluble Matter, compress the adjacent Veins. Besides the very Pus itself, which is lodg'd in this half-ripen'd Abscess, affords a very good Remedy for the Resolution of the crude and hard adjacent Parts; while, by its Heat and long Residence, it induces in them a Colliquation, which Manner of Expression is used by *Hippocrates*, *Lib. de Cap. Vuln.* where he says, *αἰάκη γὰρ τὰς σαρκας τὰς φλασθίσας ἢ κοπίται πῦρ γυνήϊα; ἰσλακῆται*, "for the contused and lacerated Flesh must of necessity be converted into Pus and consumed." For Pus generated in a Wound resolves the semilacerated Parts, and the inflamed Extremities of the Vessels, together with the contained Liquids. It appears, then, of how great Benefit it is to leave the suppurating Place close or unopened, till all the inflamed crude Matter be matured; for in so doing we imitate Nature, which best performs her Work of Suppuration, when the Place to be suppurated is closed up. Thus in a recent Wound, where the Parts are divided, after the Flux of Blood is ceased, a bloody Crust is formed upon the Cavity of the Wound, and under this Covert, by a gentle Suppuration, is the Surface of the Wound depurated. Hence *Hippocrates*, who always follows Nature, has established it as a Maxim in Medicine, *6 Epid.* "Whatever requires Concoction is to be closed up; but the contrary to this is to be kept open and dry'd."

When the Methods prescribed under these four Heads are observed, the Consequence is the Generation of a good Pus; the Qualities of a good and laudable Pus may be found under **INFLAMMATIO**.

Unless the Matter of the Inflammation be thus changed as is above described, the opening of the Abscess is both useless and dangerous.

If the inflammatory Tumor be opened before it comes to perfect Maturity, no Pus, but pure Blood, is discharged, as is observed under **INFLAMMATIO**; or if any Part of it be changed into Pus, when that is evacuated, the rest is indurated, and is with more Difficulty, and after a larger Space of Time, brought to Maturation. And besides, when an Incision is made in such Tumors while they are crude, the Pain is much sharper, and the greater the Danger of injuring the subjacent Parts. For in a mature Abscess, the collected Pus elevates the Skin above the Parts which lie under it; and therefore it may be safely opened, since the Point of the Lancet, after perforating the Skin, enters a hollow Place full of Pus; whence there can be no Danger of hurting the Vessels or muscular Fibres. For this reason, *Celsus*, *Lib. 7. Cap. 2.* treating of Abscesses in nervous Parts, says, "That Abscesses in other Places may be opened somewhat crude, but with respect to those among Nerves, the last Degree of Maturity is to be expected, till the Skin be extenuated, and the Pus brought near to it, that it may be the more easily come at." The same Regard is to be had of these Places where the large Blood-Vessels have their Course; as for instance, the Groin, and under the Arm-pits, where such inflammatory Tumors often occur, and require



quire Suppuration. For no prudent Artift will venture to open fuch Abfcelfes before they are perfectly ripe, fince the great Veffels, or fome confiderable Branches of them, may very eafily be injured, to the vaft Detriment of the Patient, upon fuch Incifion; and how much the Cure is retarded, and the Pain augmented, by opening a crude Abfcels, the Observations of the beft Surgeons will inform us. A Man of Quality, after a Fever, had an inflammatory Tumor under his Arm-pit, which was very painful. The Surgeon, who had the Care of it, defpifing the Advice of wifer Perfons, as foon as he perceived a flight Fluctuation in the Tumor, made a deep Incifion in it with his Lancet, which was very painful to the Patient, who received no Relief from the Difcharge of a very fmall Quantity of Pus on that Occafion, but, on the contrary, had his Fever and Inflammation increafed. After long Application of the moft emollient Cataplafms, the Place was at laft healed; the Cure of which might have been accomplifhed in a few Days, if the Tumor had not been opened in a rafh manner before perfect Maturation. M. de la Motte, in his *Traité Complet de Chirurgie*, Tom. I. gives feveral Inftances which confirm the Truth of this Observation. So I have fometimes feen venereal Buboës too foon lanced, for fear of a Lues, on account of the long Retention of the Pus, produce very troublefome Confequences; by which means the Cure has been protracted many Months, while the Surgeon was obliged to ufe Corroſives, to confume what the Pus, if left alone in its clofed Cavity, would moft certainly have refolved in a few Days. It is to be obferved, however, that in Abfcelfes there often happens to be fomewhat of a Hardnefs in their outer Margin, when their other Parts are perfectly matured. But when fuch Tumors break fpontaneouſly, and the Pus is by that means all evacuated, thefe hard Reliques uſually waſte away and vaniſh; and therefore the Opening of fuch Tumors as thefe would have produced no bad Effects, becauſe they were already ſuppurated in almoſt every Part.

A Softnefs of the Part, a Fluctuation of the Tumor when preſſed, its Whitenefs, a Remiſſion of the Pain, Heat, Rednefs, Tenſion, Pulſation and Fever, the Head or Top of the Tumor mucronated, and a Weight ſucceeding the Pain, are Indications that the Pus is matured, and diſpoſed for Evacuation.

As it is dangerous to open the ſuppurated Place before perfect Maturity; and, on the other hand, the Conſequences of too long a Retention of the Pus in a cloſed Place, are many and pernicious, the greateſt Attention is due to thoſe Signs, which ſhew, that the Pus which is now formed and collected in the Abfcels, may be diſcharged with Advantage. Now theſe Signs are deduced from an Alteration of the Phenomena, in the ſuppurated Part, while the irrefoluble inflammatory Matter is changing to perfect Maturity.

*A Softnefs of the Part.* It has been demonſtrated under the Article INFLAMMATIO, that in a Phlegmon there is great Hardnefs proceeding from a cloſe Compacineſs of the Solids and Liquids together, becauſe the condensed Blood ſettles in the Veſſels, which remain as yet entire, tho' obſtructed. But when the diſtended Veſſels, while the Phlegmon is under Suppuration, are broken, the Liquids extravafated, and the tenderſt of the ſolid Parts ſuffer an Attrition, Reſolution and Change into Pus; the Hardnefs muſt of neceſſity be ſucceeded by a Softnefs, ſince we have now a fluid and not a hard and crude inflammatory Matter under the Skin. Bodies may, alſo, be vaſtly hard, tho' conſiſting for the moſt part of Fluids, provided they are contained in diſtinct Veſſels, and are not confluent into one Place; as we find by Apples, Pears, Turneps, and ſome other Fruits, which, tho' they contain an extraordinary Quantity of Juice, are yet oftentimes very hard; but when they are bruifed, they become a very ſoft Pulp, as they do, alſo, when placed pretty near the Fire; for then the elaſtic Air, latent in theſe Fruits, being rarefied with the Heat, breaks the Veſſels, which cauſes an Effuſion of the Humors, by which a very hard Apple may within a Quarter of an Hour become ſo ſoft as to be almoſt fluid; and the ſame happens, if the Continuity of the Veſſels in theſe Fruits be diſſolved by means of Putrefaction.

*A Fluctuation of the Tumor when preſſed.* The Surgeon, in order to aſſure himſelf that the inflamed Place is equally ſuppurated, uſes to apply his Fingers to the Tumor, and gently preſſes it, now on this, now on that ſide; and if while he preſſes it on one ſide, he perceives an Undulation of the contained Humour on the ſide oppoſite, he ſatisfies himſelf that the Tumor is ſufficiently matured in all its Parts. But where ſuch a Fluctuation is not perceived, tho' it appears to be ſoft on both ſides, there may be ſtill ſome crude inflammatory Matter in the middle of the Tumor, which may prevent the Impreſſion made on one ſide from being commu-

nicated to the oppoſite Part. That there are ſuch Abſceſſes, which are in a manner divided into two, by remaining crude in the middle, while the outer Parts are matured, we learn from ſurgical Obſervations. And the ſame was obſerved by Hippocrates, *Epid.* 6. where he ſays, that "Tubercles externally protuberant, elevated to a Head and ſtigmated, equally matured, neither hard in the Extremities, bending downward, nor biſid, are of the better ſort; but the contrary to theſe are bad, and the moſt contrary worſt of all." And Galen, in his Comment on the Place, ſays, that "in biſid Abſceſſes, the middle is never without Fault, as being crude [*ἀνερπύλλος*]" unſuppurable and hard." It is true indeed, that a mature Abſceſs has this Fluctuation in common with Aneurifms, and ſome ampuſſous Swellings containing Humors; but an Abſceſs is very well diſtinguiſhed from them, in that it is preceded by an Inflammation. It is plain enough, that the Fluctuation of a preſſed Tumor cannot well be perceived, unleſs the Tumor be eminent; for while the Abſceſs is latent in the *Panniculus Adipoſus*, deeply ſituated among the Muſcles, it is not eaſily diſcovered by this Mark of Fluctuation.

*Whitenefs.* It has been demonſtrated under the Article INFLAMMATIO, that a Rednefs ought to accompany an Inflammation, becauſe the obſtructed and dilated Veſſels are replete with a red thick Blood. But when all that thick inflammatory Matter, together with the obſtructed Extremities, are changed into a white and equal Pus, the Cauſe of a Rednefs no longer exiſts. Beſides, while the Pus from within, and the moſt emollient Fomentations or Cataplafms from without, are macerating the Skin, it decays in a manner, and acquires a white Colour; for when a Plaſter of any ſort is applied, the Skin being under a continual Fomentation from the reflected Vapour of the exhaling Liquid, becomes thoroughly white in a few Days, and being inſenſibly waſted and extenuated, appears at length of the Colour of the ſubjacent Pus. We ſee then the Reaſons why a white Colour is juſtly reckoned a Sign of the Maturity of an Abſceſs. Celfus, *Lib.* 5. *Cap.* 28. treating of Abſceſſes, ſays, "that ſuch as become ſofter on a ſudden, are of the moſt favourable Sort; as are thoſe which have their red Colour fading into a white; and theſe are Signs that Pus is actually forming; for a Tumor and Rednefs were long pre-exiſtent."

*A Remiſſion of the Pain, Heat, Rednefs, Tenſion, Pulſation and Fever.* All theſe Symptoms of an Inflammation are produced by the Blood impelled by the vital Force, and with an increaſed Impetus and Celerity preſſing upon the obſtructed Extremities of the Veſſels, an Account of which is found under the Article INFLAMMATIO. When, therefore, the Extremities of the Arteries, which were obſtructed are by the Suppuration, ſeparated, the Cauſe of theſe Symptoms ceases, and conſequently the Symptoms themſelves diſappear, or at leaſt are very much diminished. Hence Hippocrates, 2 *Aph.* 47. already quoted, juſtly obſerves that "the Pain and Fever are more intense at the Time when the Pus is generating, than when it is generated." It is, however, to be obſerved, that the Pain is ſometimes very acute, tho' the ſuppurated Part be perfectly matured, becauſe the Collection of Pus, which is every Day augmented, diſtends the incumbent Skin, and more and more dilacerates it; but this Pain has its Original, it is plain, from another Cauſe; and when the Abſceſs breaks ſpontaneouſly, or when perforated by the Lancet, it ceases immediately. Celfus, therefore, in the Place before quoted, after enumerating the Symptoms by which an Abſceſs is known to be crude, preſently ſubjoins, "But when theſe are remitted, and the Place itches, and appears whitish or ſomewhat livid, the Suppuration is mature." But we muſt here obſerve, that tho' the Skin, when the Abſceſs is mature, be generally whitish, yet the cutaneous Veſſels are ſometimes compreſſed by the diſtending Pus to ſuch a Degree, that all vital Influx and Efflux of the Humors being quite ſuppreſſed, the Skin begins to gangrene, and acquires a ſomewhat livid Colour. The like Signs of a mature Abſceſs we have in *Aegineta*, *Lib.* 4. *Cap.* 18. where, after enumerating the Signs of an inflamed Part tending to Suppuration, he tells us that "After the Abſceſs is come to its Height, many of theſe Signs are mitigated, the Part is affected with a pricking kind of Itching, a Numbneſs is felt, and the Tumor riſes into a ſharp Head, which is ſoft, and yielding to the Touch, and has its Surface near the Head abraded [*ἀποσφύλλαι*]." Here he remarks that the Skin on the mucronated Top of a mature Abſceſs ſecedes *per Strata*, by a ſort of Excoriation.

*The Top of the Tumor is mucronated.* When the Phlegmon begins to mature by Suppuration, there is almoſt conſtantly perceived a Softnefs and Fluctuation in the Middle, tho' the exterior Parts remain ſtill hard. For ſince the moſt emollient Cataplafms are uſually applied to promote the Suppuration



ration; the relaxed Integuments in this Place will give way to the Pus as it gradually increases, and be extended beyond the equable Superficies of the Tumor, because the greater Hardness of the rest of the Parts prevents their easy Extension. For this Reason the mucronated Top of the Tumor will be eminent above the other Parts; and in this Place, the Integuments being gradually distracted and weaken'd, the Abscess will break spontaneously, or may be very safely open'd with the Lancet.

*A Weight succeeding the Pain.* We have already observed, that the Pain increased as long as the inflamed Part was under Suppuration; for the Extremities of the obstructed Vessels must be separated by Degrees, and, consequently, when the nervous Fibres, dispersed through the Coats of the Vessels, are just about to break, the Pain must be sharpest, but will cease after an intire Rupture. But when the Abscess is broken, there will appear a Collection of Pus without the Vessels, lodged either in a Cavity preternaturally produced, or in a natural Cavity enlarged, and this Pus with its Weight presses upon the Parts on which it settles. For a Person in Health, tho' he feels not the Weight of his own Body, yet, as soon as there is a Collection of extravasated Humours, he will immediately be sensible of their Weight. When the Vessels are broken by a violent Contusion, and there is a Collection of Blood in the *Panniculus Adiposus* under the entire Skin, the Patient presently complains of an unusual Heaviness of the Part. When the Legs are distended with an Accumulation of Serum in the Anasarca, the miserable Patients move their Limbs as if they were oppressed with Weights of Lead. But this Sense of Weight takes place only where there is a considerable Suppuration, as is easy to imagine; and in internal Diseases the principal Sign of a latent Abscess is the Sense of a dead Weight, succeeding an acute Pain in the affected Part; as it happens in a Pleurisy, Peripneumony, and the like Diseases.

If the Pus be then suffer'd to remain long in a close Place, it becomes thin and acrimonious, putrefies, increases, corrodes and consumes the neighbouring Parts; and by its Bulk, Weight and Motion, creates various kinds of Sinuses and Fistulas in different Parts, particularly very pernicious ones in the *Intestinum Rectum*; or else, the thinner Part being dissipated, the rest becomes indurated, and forms hard Tumors, especially about the Glands; or lastly, being absorbed by the lymphatic Veins, or Blood-Vessels, through their corroded Orifices, it is mix'd with the Blood, which it contaminates, and forming Collections in the Viscera, corrupts those Parts, disorders their Functions, and produces numerous Diseases, and those very severe and dangerous.

When it appears, by the Signs before enumerated, that all the inflammatory crude Matter is maturated, and converted into good Pus, that Pus is as soon as possible to be evacuated; since after it is arrived at its ultimate Perfection of Whiteness, Thickness, Smoothness, Equability, and Want of Smell, it begins to degenerate, and alters every Day for the worse. For it settles without the Vessels, and is no longer subject to the Laws of Circulation, but stagnates; and through the Heat of the Place, undergoes a spontaneous Change, by which it tends to Putrefaction. For tho' in a close Place, where no Air is admitted, all animal Parts are slower of Corruption, yet they putrefy. Besides, a greater Thinness is observed to be produced in our Humours, by means of Putrefaction; for Blood discharged from the Veins immediately concretes, but when afterwards it becomes putrefy'd, it is entirely dissolved. The Bile in the Gall-bladder in sound Animals, which are at rest, is of a thick Consistence, but in putrefying dissolves into a thin Substance. For the same Reason Pus, if too long retained in a mature Abscess, loses that Unduosity, and balsamic Viscidity, in which Respect it pretty well resembles Cream, and is changed into a thin, ichorous Fluid; and this Thinness, which increases in putrefying, is always attended with a greater Acrimony. The whole Superficies, then, of that hollow Place in which the Pus render'd thus thin and acrimonious, is contain'd, being continually soaked in a thin and corroding Ichor, the tender Extremities of the Vessels which have their open Orifices disposed on the Surface will be destroyed, and the extravasated Humours corrupted, whence the Sides of the containing Cavity being corroded, the Extent of the Abscess will be enlarged, and the Quantity of the Pus increased by the Conflux of the Humours through the corroded Vessels. Now we have numberless Instances from the most approved Authors which prove, that the solid Parts of the Body have been corroded by Pus too long suffer'd to settle, and become putrefied. We read in *Schenckius, Obs. Medic. Lib. 2.* that after an Empyema the Lungs have been consumed to such a Degree, that there have been scarce any Remains left of that noble Bowel. The same Author gives us another Example, where not only the Pericardium, but

the very Substance of the Heart itself, tho' of so solid a Contexture was corroded by the Pus. And it is a general Complaint and Observation among Surgeons, that solid Bones have been corroded, and converted into a Caries in deep Suppurations. Hence we see the Reason why *Hippoc. 7 Aph. 47.* says, that those who are affected with an Empyema, and from an Operation of Cutting or Burning have a Discharge of white and pure Pus, recover; but if the Pus be bloody, feculent, or fetid, the Patient dies. And in the next Aphorism he tells us, that those who labour under a Suppuration of the Liver, and being burnt for the same, have an Efflux of Pus resembling Amurca, or Lees of Oil, die of the Disease; for such a Pus indicates a Corrosion of the very Substance of the Viscera, the Effects of which must, of Necessity, be fatal.

Besides, since an Inflammation is generally seated in the *Panniculus Adiposus* [See INFLAMMATIO.] the Suppuration of it must have the same Situation. But the extraordinary tender Contexture of this Membrane makes it very easy to be corroded by the Pus, when grown acrimonious; and even the very Weight and Bulk of the Pus, by long Settlement, in so easily dilatable a Substance, will distend it, and work out for itself new Ways and Sinuses of a very dangerous Nature. It has been demonstrated under the Articles *CAPUT* and *THORAX*, that the Ingress of the Air into the *Panniculus Adiposus* has caused such an Inflation of it, as to distend the whole Body, whence it appears that there is a Passage from every Part of this Membrane, through almost all its Circumference. And I have observed, that when the Parotid Gland has been suppurated, for want of procuring a Vent for the collected Pus, the same has made a Passage for itself in the *Panniculus Adiposus*, descending by the Neck, Shoulder, and Arm to the Flexure of the Cubit, where it corrupted the Ligaments to such a Degree, as to cause an incurable Ankylosis. A deep Inflammation near the Joint of the Thigh was succeeded by an Abscess, and when the Pus, which lay latent under the large Muscles, could not be discharged, it made its Way downwards, and formed a sinuous Ulcer, which extended itself through the whole Length of the Thigh and Leg; and, in the End, by inducing a purulent Cacoehymy, after trying in vain all manner of Remedies, proved mortal to a very hopeful young Gentleman. If it be, also, consider'd, that the Pus, which is thus collected in the *Tunica Cellulosa*, being attenuated by Heat and long Settlement, is frequently incumbent on some of the strongest Muscles, we shall easily be convinced, that when it is pressed by the Motion of these Muscles, it may be propelled through all the neighbouring Places, and by that means be the Cause of deep Sinuses, and very bad Fistulas, especially when in creeping through the *Panniculus Adiposus*, it insinuates itself into the Interstices of the Muscles. And the greater the Thickness of the *Panniculus Adiposus*, and the more numerous the Strata, or Lays, of the Muscles, incumbent on one another, the worse are the Sinuses formed by the Retention of the Pus; for which reason, in the Abdomen, because of its extraordinary Fatness, intermixed with the various Strata of the abdominal Muscles, we meet with such troublesome Sinuses and Fistulas.

But there are no worse Sinuses and Fistulas, from too long a Retention of Pus, in any Part of the Body, than about the *Intestinum Rectum*. For since that Part is appointed as a Passage for the very grossest of the Feces, it was necessary that it should be easily distended all around its whole Compass, for which End it is surrounded with a very soft and copious Fat, whence it is that Pus, if long retained in an Abscess form'd in this Place, will be capable of producing very deep Sinuses. "For the putrid Matter [*συνεχόμενον*] corrodes the soft Parts, says *Hippocrates, de Fistulis Cap. 1.* and as the *Intestinum Rectum* is humid, and of a soft Flesh, it feeds in it till the Tubercle be broken, and the Parts beneath towards the Anus appear putrefy'd." And if the *Intestinum Rectum* itself should happen, also, to be corroded, the Pus will be capable of diffusing itself through the cellular Membrane and mucilaginous Cavities of the *Intestinum Rectum*, and produce very tedious and troublesome Disorders, which are much increased by the Feces defiling every thing in their Passage this Way with their Impurities. *Hippocrates*, in the Book before quoted, being apprehensive of such bad Consequences, directs us not to wait till the Tubercles in those Places be quite mature, but speedily to open them while they are yet crude.

*Or else the thinner Part being dissipated, the rest becomes indurated, and forms hard Tumors, especially about the Glands.*

This is sometimes, tho' not often, the Consequence of too long a Retention of Pus, especially when the Abscess is treated with very hot Remedies, without a Mixture of Emollients and Moisteners. Thus it is usual for Women to expose their suppurated Breasts to the Heat of burning Coals, to avoid the Opening of a mature Abscess by the Surgeon's Lancet. The thinnest Part of the Matter is by this heat evaporated, and



the inspissated Remainder hardens into a Scirrhus, and the Patient lives for the future in continual Fear of a Cancer, which is often the Consequence. The like Hardness often remains after opening venereal Buboës before their due Maturation, or when they have been treated with too heating Remedies. Very good in such Cases is the Advice of *Galen*, *M. M. Lib. 14. Cap. 4.* where treating of the Cure of an Erysipelas and Phlegmon, when there was Reason to apprehend a Scirrhus consequent upon these Disorders, he says, "Whoever should attempt to evacuate them by violent drawing and discussive Remedies, instead of endeavouring to soften and dissolve them by moistening and heating Medicines, will flatter himself for the first Days, that the Patient is in a very fair Way of Cure; but the Disease will leave Reliques which are incurable, since the thinner Parts of the morbid Matter being dissolved, what remains turns to a kind of stony Concretion."

Or, lastly, being absorbed by the lymphatic Veins and Blood-Vessels, through their corroded Orifices, it is mixed with the Blood, &c. It is observed under the Article VULNUS, that Pus in Wounds is generated from an Effusion of the Humours through the Extremities of the Vessels, their Inspissation by their Settlement, and the Resorption or Dissipation of their most fluid Parts. For if the Wound be deterged every Hour, you will find no Pus, but only a thin Humour, which in the Space of twelve Hours will be converted into Pus. The most fluid Part of the extravasated Humours seem indeed to be rather resorb'd by the Mouths of the Veins, than dissipated outwards, because good Pus is seldom generated, unless the Wound be well covered with Plaisters or Ointments; and over all the Surface of the Wound are dispersed the gaping Orifices of Veins, as well as Arteries, which absorb the contiguous Humours with the same Force as the smallest Glass Tubes attract Liquors, convey them to the larger Veins, and so mix them with the Blood. By the like Method of Reasoning, Pus long retained in an Abscess will be spontaneously attenuated, and being deprived of its mild and gentle Nature, will become acrimonious; and being resorbed by the contiguous Orifices of the Veins, will infect the Blood with a purulent Cacoehymy, productive of a hectic Fever and Phthisis. That Pus collected in a Cavity of the Body is capable of a Resorption by the Orifices of the Veins, and by that Means of being mixed with the Blood, we are convinced by Multitudes of Instances. A Person of Quality, in a Battle, was shot through the Elbow with a leaden Bullet, by which the Bone of the Elbow was fractured, and the Consequence of the Wound was a continual Fever, attended with many very bad Symptoms, and a considerable Abscess, which occupied the Place of the Wound and the adjacent Parts. When it was agreed among the Surgeons to open the Abscess, which was now grown mature, the Patient was seized with a violent Diarrhœa, and immediately the Tumour of the wounded Part quite vanished, and a vast Quantity of Pus was observed to be evacuated by Stool. And whenever afterwards the Wound happened to swell with an Accession of new Pus, it was in like manner evacuated by a supervening Diarrhœa; and by this Means, the Wound, tho' dangerous enough, was cured. *Belleste, Chirurg. d'Hopital.*

A Man who had received a Wound which perforated the Abdomen, was observed by *Scultetus, Armament. Chirurg. Observ. 61.* to have his Urine mixed with a great Quantity of Pus, the Excretion of which was succeeded by a Mitigation of all the Symptoms. *Galen, de loc. affect. lib. 6. cap. 4.* observed an Imposthume of the Lungs cleansed and purged off by Urine, and another in the Thorax which had its Expurgation through the Intestines by Way of Stool. A Vomica of the Lungs, with a Distortion of the Spine, was cured by a purulent Dysentery, which lasted several Days, tho' the great Weakness of the Patient, and a Multitude of other very ill Symptoms, had defeated all Hopes of Recovery, in the Opinion of the most experienced Physicians; and, what is more surprising, the Patient, who was a young Woman, was by this Means not only rescued from imminent Danger of Death, but had the Distortion of her Spine spontaneously removed. *Mémoires de l'Acad. des Sciences, An. 1731.* In the Small Pox, a Resorption of the Pus is usually observed to excite very bad Fevers; after which there is frequently a Congestion of that Pus in some Part or other of the Body, where it rises into Tumours, which opened, discharge true Pus, and sometimes degenerate into very bad Ulcers. We meet with a vast Number of Instances, in the most credible Authors, which assure us that Pus too long retained in a close Place may be absorb'd by the Veins, and mixed with the Blood, and afterwards be deposited in various Places of the Body; and at the same time it appears that the Event is very doubtful in these Cases, depending on an Uncertainty, whether this Congestion of Pus secreted from the Blood, happens to fall on this or that Part of the Body. For tho' in the Ex-

amples just related, the Pus was, very fortunately for the Patients, discharged by Stool and Urine, yet the Viscera are always in great Danger of being corrupted by some pernicious Collection of the purulent Matter, or it is to be feared that the whole Mass of Blood with which it is mixed, should be so depraved by it, as to give Occasion for the Production of incurable Diseases. For the Collection of Pus in the closed Abscess will scarce be resorbed, unless it be first reduced to a considerable Degree of Thinness and Acrimony; and after it is mixed with the Blood, and flows through the Vessels, it acquires a still greater Acrimony, the Consequences of which may be very bad Fevers, Corruption of the Blood, and other Disorders without Number. From this Cause it so often happens in the Small Pox, that when the Patient is judged to be out of Danger, a high Phrenzy is on a sudden excited, and succeeded in a short time by Death, the Pus being resorbed into the Blood, and its Course turned upon the Brain. We have an Instance to this Purpose in *Hippocrates, 7 Epid. Ægr. 30.* where he describes the Case of one who laboured under an internal Suppuration, and by the Signs, which were a Stertor of the Breast, and a Difficulty of Respiration, seemed to have a great Collection of Pus within. "About the sixtieth Day, he tells us, the Left-Eye was blinded by a Tumour, without Pain, and not long after the Right-Eye, also, was in the same Condition, and the Pupils of the Eyes became very white and dry, and in a short Time after this Blindness, not more than seven Days, the Patient died in a Stertor, and a high Delirium." In this Case it seems very likely that the resorbed Pus had by an unhappy Metastasis, its Course first diverted upon the Eyes, and from thence upon the Brain, where it proved fatal. The Diseases proceeding from these purulent Collections are various, according to the different Viscera where they settle themselves, while by pressing on the Parts, and corroding them by a greater or lesser Degree of Acrimony, they either disturb, or wholly destroy their Functions. It appears, also, from the Premises, that the highest Prudence is necessary in such Cases; for an Abscess opened too soon, before all Things have acquired their due Maturity, may be very detrimental to the Patient, as has been shewn before; and again, if a Vent be not given to the mature Pus, very dangerous Disorders may possibly be the Consequence. The Signs of perfect Maturation are already given under this Article.

It is this Resorption of Pus, which proves so often fatal to those, who by the Amputation of a Limb, or Excision of an Aneurysm, have received a large Wound, which generates every Day a great Quantity of Pus. For if the Pus, which is collected on the Surface of the Wound, be frequently deterged, the Body is deprived of almost all its Nutriment, which passes off this Way, and so the Patient wastes away in a Marasmus. On the other hand, if the Pus be left too long on the Surface of so large a Wound, it is resorbed, and induces a purulent Cacoehymy, with all the Mischiefs which may proceed from it, unless by drinking Decoctions of detergent Vulneraries, great Part of the Pus mixed with the Blood be evacuated. Sometimes the Patient is too weak to bear the drinking a sufficient Quantity of these Decoctions, but becomes hydropic from their Use, in which Circumstance he very seldom recovers.

By the same Methods with which Maturation is procured, are the Integuments of the suppurated Place, both above and beneath, together with the adjacent Parts, mollified, attenuated, and relaxed.

When an Inflammation cannot be cured by a kindly Resolution, Suppuration only is to be chosen, for obtaining which the fix curatory Indications mentioned in the Beginning of this Article are required. For, in the first Place, the inflammatory crude Matter is to be reduced to perfect Maturation. Of this we have already treated, as also of the Signs by which we are assured that the Maturation is accomplished; and we have just now enumerated the bad Consequences which are to be dreaded, when a mature Abscess, full of good Pus, is left too long closed. The second curatory Indication was, that the Place which required Suppuration, together with the adjacent Parts, may be mollified.

An Inflammation generally affects the Membrane called *Panniculus Adiposus*, or *Tunica Celulosa*. [See INFLAMMATION] The thick Skin, with the Epidermis, are incumbent on this Membrane, almost throughout the whole Surface of the Body; and they must either be perforated, or break off themselves, to give a Vent to the mature Pus; hence it appears to be highly requisite that these Integuments should be relaxed and mollified. But the same Remedies which have been already recommended for the Maturation of an inflammatory crude Matter will at the same time have the Effect here required. For all those emplatric and glutinous Substances, whose



whose Use is directed above for Maturation, have also the Virtue of relaxing and mollifying the solid Parts of the Body. By the Application therefore of such Cataplasms or Fomentations to the suppurating Place, the Integuments are macerated, and as it were wasted away, and the Pus which acts on the internal Superficies of the Skin, at the same time soaks and macerates it on that Side, in which Effect it is also much assisted by that maturing Heat which resides in the Part under Suppuration. There seems to be nothing, then, further required, in order to answer the second curatory Indication.

The Resistance of the Integuments being diminished by the Remedies just now prescribed, the formed Pus is expelled or attracted forth by maturing Remedies.

The Pus now supposed to be formed, and lodged in a close Place, where it increases daily, and is pressed by the contiguous Parts, will, according to the common Law of all Fluids, tend to the Parts where is the least Resistance. If the Integuments then, by Application of emollient Medicines, are so debilitated, as easily to give Way to the distending Pus, this latter will elevate the Integuments, and bend its Force outwards, instead of working out for itself sinuous Ways in the Panniculus Adiposus. All those Remedies, therefore, which are employed in the Maturation of the inflammatory crude Matter, at the same time attract forth the formed Pus; for it is demonstrated under the Article OBSTRUCTION, that the Nature of Drawers, or attractive Remedies, is to diminish the Resistance in the Place, whither the Derivation is designed to be made.

Then moderately acrimonious, emollient and subpinguious Medicines, mixed together, are to be applied, that the dead and wither'd Integuments may the more easily, and without Pain, be opened.

A Passage must be procured for the Discharge of the Pus collected under the Integuments, while they are entire. A Division, therefore, must be effected of these Parts, either spontaneously and by a gradual Dilaceration from the distending Pus, or by the Surgeon's Lancet. That this Division may be performed either way with as little Pain as possible, highly emollient and subpinguious Topics are to be applied, by which the Integuments are wasted and withered to such a degree, as to be in a manner dead and insensible. When, therefore, the mature Abscess begins to gather to a Head, or becomes mucronated, it is customary with the Surgeon to anoint the Top with a Feather dipt in Basilicon, or some other very emollient Ointment, by which the Integuments in this Place may be mollified to an extraordinary Degree, and the Fibres being by this means relaxed, the Pain is diminished, [See VULNUS.] which in this prominent Part is usually pretty sharp. And sometimes these Emollients are mixed with moderately acrimonious Medicines, such as Leaven of Bread, Venice Soap, Honey, and the like, which will produce a sort of Deadness in the macerated Integuments, and facilitate their Rupture. Thus Women employed in Washing, whose Hands are all the Day long macerated in soapy Lye, have the Skin of their Fingers white and almost dead, and very subject to Excoriation. Formole for this purpose, of rendering the Integuments thin and less sensible, occur under the Article ABSCESSUS; which see.

The Remedies before proposed having had their due Effect, in the next Place, the Surgeon, after dexterously pressing up the Pus into the most elevated Part of the Tumor, is to enter his Incision-knife into the inferior Part of the whitest, softest, and most eminent Place, till the Pus appearing, assures him, that he has penetrated far enough; then let him enlarge the Wound upwards, by elevating the Knife, or passing the Point thereof to the opposite Side, divide the intermediate Integuments, avoiding the Fibres and Vessels; this done, let the redundant Pus be gently and successively expressed, and the Place kept guarded from the Air, and unmolested with Tents.

When the whole Compass of the suppurated Part is found to be perfectly mollified, and we are assured by all the proper Signs, that Maturation is completed; in this Circumstance, if the Integuments will not break spontaneously, a Discharge for the Pus is to be procured by Art, in order to avert those mischievous Consequences which have been mentioned. In glandulous Places, Abscesses are suffered to remain longer than in other Parts, because they are more in Danger of a Scirrhus, if any thing should perhaps remain unmaturing. *Celsus*, therefore, speaking of opening Abscesses, gives the following Directions, *Lib. 7. Cap. 2.* "If the Pus

"be mature, and in the Groin, or under the Arm-pits, a Section is seldom to be attempted; nor in any Place, where the Abscess is but moderate; nor where it is but superficial, or even seated in the Flesh, unless the Weakness of the Patient obliges us to hasten the Cure. In these Cases, it is sufficient to procure a spontaneous Discharge of the Pus by means of Cataplasms, for the Place which has not felt the Surgeon's Instrument, may commonly be healed without an Eschar." Here *Celsus* prefers a spontaneous to an artificial Opening of an Abscess, not only in glandulous, but also in other Parts, principally on account, it seems, of the Danger of Defæcation by a Cicatrix. But a Wound inflicted by a Lancet, will, however, admit of a more decent Consolidation than a larger Opening and Seccession of the Skin effected by a Corrosion of the contained Pus. And the Reason why *Celsus* often observed a deforming Cicatrix resulting from the Operation of the Lancet, plainly appears from what we read in the same Place. For where the Pus happen'd to be deeply seated, he directs the Abscess to be open'd with a red-hot Iron; and in another Case, where the Skin is extenuated to a very great Degree, he orders it to be all cut off above the Pus; and he would have the same done, if the Skin be pale, for then, he says, it is dead, and will never be of any Service, and therefore is fitter to be cut off.

In giving vent to the Collection of Pus, in a mature Abscess, Regard is to be had, as much as may be, to the Ease of the Patient, and the Security of the subjacent Parts; for no more than the common Integuments, under which the Pus is lodged, and which are elevated and distended by it, are to be divided. It is usual for the Surgeon, in this Case, very gently to press the suppurated Tumor all around, to cause the Integuments to recede as much as possible from the subjacent Parts; and since it generally happens for some Part of the Tumor to be prominent, or gather'd to a Head, as was before observ'd, the same is especially to be enter'd by the Incision-Knife, for in this Place the Integuments being much extenuated, and in a manner mortify'd, may very easily, and almost without any Pain to the Patient, be divided; especially if the Head or mucronated Top be macerated before-hand, by the Application of subpinguious and acrid Medicines, as before prescribed. The Incision is to be made, as much as conveniently may be, in the lower Part of the Tumor, that the Pus may find a Vent through the Opening, by Virtue of its own Gravity, but yet so as to consider the Situation which the affected Part will have after the Aperture. "We are to endeavour, says *Celsus*, in the Place before quoted, that the very Bottom of the Sinus may discharge itself, that no Humour may remain and settle within, and so corrode and create Sinuses in the sound and neighbouring Parts." But if the Apex of the mature Abscess be in a superior Place, and the Integuments appear softest and whitest, in the same part, it is better to make the Incision there than in another, tho' inferior Place, where the highly sensible and inflamed Skin cannot be divided without extreme Pain, and oftentimes very troublesome Consequences. For after the Aperture is made, the Pus which is left in the Abscess may, by changing the Situation of the Part, or by a gentle Compression with Bolsters and a proper Bandage, be prevented from working out to itself, by its own Weight, sinuous and fistulous Passages in the *Panniculus Adiposus*.

As soon as the Knife has penetrated the Integuments, it plunges in the Midst of the Pus, which will immediately begin to vent itself by the Sides of the Instrument, especially if the Integuments are stretched by the subjacent Pus from a gentle Compression of the contiguous Parts. Where there is a considerable Quantity of Pus, it is best to plunge the Knife to a good Depth, that afterwards with elevating its Point by a neat and equable Section, the Wound may be enlarged: And for the same Reason, if it may be done with Safety, the Instrument is passed through the Middle of the mucronated Head of the Abscess to the opposite Side, and then, by elevating it, the incumbent Integuments are at once divided, and a very large Opening made, which can never be the worse for the Patient: For unless the Orifice be thus made very wide, it often happens that considerable Parts of the *Membrana Cellulosa*, almost gangrenous, will be protruded together with the Pus, and obstruct the Opening, so as to render a new Section necessary: Besides, when the Pus is evacuated, the Integuments, which were before in a State of Tenseness, become contracted by their own proper contractile Force, and very much diminish the Aperture. It may pass for a general Rule, therefore, when an Abscess is to be opened, to make the Wound as wide as may be done without danger of hurting the subjacent Parts. But when the Pus is lodged just under the Skin, every one sees that there is no Necessity of plunging the Knife to any considerable Depth.

Sometimes



Sometimes the Pus happens to lie pretty deep, and then more Caution is required; for it would be a Disgrace to make a fruitless Incision into an Abscess, and it is often dangerous to thrust the Point of the Knife to a considerable Depth: On such Occasions, the Surgeon has a fair Opportunity of shewing his Skill and Dexterity; for unless he be well acquainted with the Situation of the Parts from Anatomy, he will always be either foolishly timorous, or rashly venture on Danger through Ignorance: For since an Inflammation has its Seat almost constantly in the *Panniculus Adiposus*, as was before observed, and there insinuates itself among the Muscles on every Side, it appears that the Pus may be very deeply lodged, though not the least Defect be observed in the Integuments. The antecedent Signs of an Inflammation, with the succeeding Indications of a Suppuration, the Fluctuation of the Pus, perceptible when the Part is pressed, will afford some Light in such obscure Cases. That celebrated Surgeon *De la Motte, Traité complet de Chirurg. Tom. I.* has a remarkable Instance to this Purpose: A Woman, after the Suppression of the Lochia, had for nine Months been confin'd to her Bed, and was forced to lie with her Body incurvated in a most miserable Manner, in order to alleviate, in some Measure, her racking Pains; for she lay with her Face to her Knees, and her Heels went back towards her Buttocks, and in that Posture she continued Night and Day. As the Pain lay chiefly in the Hypogastrium, half Way between the Navel and the Pubes, the Place was very carefully examined by this excellent Surgeon, who perceived some Kind of Undulation, tho' there were no Hardness nor Tumor, nor the least Change in the Colour of the Integuments. Confirmed by long Practice in the Diagnosis of the like Disorders, he concluded that a profoundly latent Abscess was the Cause of all this Disorder, and resolved, contrary to the Opinion of four other Surgeons who before had this miserable Patient under their Care, to make an Opening in the Part, and performed the Operation with the greatest Caution, penetrating into the very Cavity of the Abdomen: Not the least Quantity of Pus, however, was discharged, though the Abdomen was compressed, the Patient held her Breath, and the Posture of the Body was changed, in order to promote an Evacuation. The honest Operator being confounded at this unfortunate Event, took his Leave, being laugh'd at by the other Surgeons, and ingeniously confesses, that he pass'd that Night without Sleep. The next Morning, when he came to renew the Dressing, he observed, to his great Joy, a vast Quantity of Pus discharged in the Bandage, though he knew not whence it came. The Discharge of Pus continued every Day for the Space of about six Weeks, at the End of which the Woman was perfectly recovered from so desperate a Disease, and continued to bear Children, and could walk with Ease, only a little inclining to the right Side, where the Seat of the Disorder lay. The like Case has fallen under my own Observation, where a Surgeon open'd a deep Abscess in a Woman's Breast, without the immediate Discharge of a Drop of Pus, though he entered his Incision-Knife to the Depth of an Inch, and more; but in a few Hours there was a vast spontaneous Discharge of Pus through the Wound. This is enough to convince us, that we are not to alter our Judgment with respect to the Diagnosis in such Cases on a sudden, if after just Deliberation and weighing all Things, we should at last resolve upon an Operation, and to open the affected Part; for though the Point of the Knife might not, perhaps, penetrate to the Seat of the Pus, yet the Pus may soon after, as it frequently happens, be derived, of its own Accord, to the Wound, as the Place of least Resistance.

*Avoiding the Fibres and Vessels.* If the Collection of Pus be lodged immediately under the Integuments, and, as *Celsus, Lib. 7. Cap. 2.* expresses it, be contiguous to the Skin, it is plain that there can be no Fear of hurting the Vessels or Fibres, because the Pus elevates the Skin from the subjacent Parts; nor has it hitherto appeared that a true Suppuration ever affected the Substance of the Muscles, but took up its Seat only in the *Panniculus Adiposus*. For tho' *Paulus Aegineta, Lib. 4. Cap. 18.* defines an "Abscess to be a Corruption and Alteration of the Flesh, or fleshy Parts, as the Muscles, Veins, and Arteries;" yet we know by daily Experience, that after the greatest Suppurations, and even Gangrenes, in which the *Panniculus Adiposus* has been consumed, the Muscles have been found very clean and entire. It is true, indeed, that surprizing Degeneracies and Alterations have been observed not only in the *Panniculus Adiposus*, but in the very Substance of the Muscles: But when the Tumors in such Cases have been open'd, there has been no Discharge of Pus, but of quite another Liquor, whence such Affections seem not properly to belong to the Class of Suppuration. We have a memorable Instance of

such a Disorder in the *Medical Essays, Tom. 1.* A Woman had a Swelling, for some Months, on the Outside of her Leg; the Tumor was prominent in the Middle, and soft, with a manifest Fluctuation, when pressed with the Fingers. When the Skin came to grow red in the Part, the Patient was in violent Pain, and had a hectic Fever, attended with nocturnal Sweats, and a Diarrhæa, which returned every third Day, with other Symptoms. It was at last resolved to open the Place, and after the Application of maturing Cataplasms for two Days, when the Integuments were much attenuated, and the Fluctuation was very plainly perceptible, the Tumor was open'd; a pretty deep Incision being made, no less than an Inch and half, not a Drop of Pus flow'd, but two or three Ounces of Mucus; and the next Day a Fungus appeared in the Wound, which being remov'd, the like grew up again; and after vast Quantities of the like Substance had been thus removed, a Probe introduced into the Place penetrated through the whole Substance of the Leg, till it touched the Skin on the opposite Part. The Woman dy'd a few Days after, and the Skin of the affected Leg was found whole; but the *Panniculus Adiposus*, together with the Muscles, was degenerated into a fungous Substance, in such a Manner, that after diligent Examination, the Muscles could not be so much as distinguish'd, and the Periosteum had every where separated itself from the affected Bones. From this Case it appears indeed, that the Muscles may by the Force of a Disease be transformed into such a deformed Mass as before related, but there was no Pus here discover'd, which is the Thing principally to be regarded. It is a Question whether *Hippocrates, Lib. de Articulis*, is to be understood of such Abscesses, where he says, "But, in short, all the other [Tumors] which are mucous, and discharge Mucus, as being glutinous, when touched, slip away under the Fingers to this or that Side; for which Reason the Surgeons find them deeper than they expected." He was here treating of a Fracture of the Ear, and of a Suppuration succeeding it, and advises, if an Incision be necessary, not to cut superficially, because the Pus is more deeply lodged than is commonly imagined. He had told us a little before, that Cataplasms are hurtful in Fractures of the Ears, because they excite Abscesses, with Plenty of Mucosities, and troublesome Suppurations; and then subjoins the Words quoted.

There seems, then, not to be so much Danger of injuring the Fibres in opening mature Abscesses, and consequently no Necessity of all that Care and Circumspection so much insisted on by *Fabricius ab Aquapendente, de Chirurg. Operat. Cap. 107.* as necessary to be used in almost all Parts of the Body, that there may be no Incision but according to the Course of the subjacent muscular Fibres. And the same Author himself, afterwards, in the same Chapter, confesses that Persons ignorant of Anatomy are every where found, who yet are successful enough in opening Abscesses, "on Account of the Redundance of Pus, which elevates the Place, and renders the subjacent Parts safe from the cutting Instrument."

*This done, let the redundant Pus be gently and successively expressed.* In very large Abscesses, which contain a vast Quantity of Pus, it seems not always safe to evacuate the Pus all at one Time; for all the Parts which surround so large a Bag full of Pus, and were very much pressed before, being thus in a Moment freed from the Pressure, become very flaccid, and admit vast Quantities of Blood into their Vessels, whence less Remittances of the same are made to the Brain and Cerebellum, and Faintings, and perhaps Death itself are thence occasion'd. The same Danger attends a sudden Relief or Relaxation of the Parts from the Pressure of any other Collection of Humours. And this made *Hippocrates* say, 6 *Aph. 27.* "That Persons labouring under an Em-pyema, or Dropsy, and burnt or cut for the same, die away and expire under the copious and violent Effusion of the Pus or Water." But if the Abscess be seated in such a Part of the Body, that when a proper Aperture is made for discharging the Pus, the Parts may be supported and compressed by swathing them with a Roller, the greatest Evacuations may safely be performed, as appears from the Success of that Method in evacuating the Waters of an Ascites, after the Operation of the *Paracentesis*. [See *HYDROPS*.] Nor will it injure the Patient to leave some part of the Pus undischarged; for the Sides or Inclosure of this hollow Bag are cherished and depurated by a good Pus, and covered with the same, as with a natural Balsam, the best certainly that can be accommodated to it, the half-mortified Ends of the Vessels are separated, and all Things are disposed for an happy Consolidation, as appears more at large under the Article *VULNUS*, which see. It is only required, that so great a Quantity of Pus should not be left as might injure the Parts by not distending them, and create Sinuses in the *Panniculus Ad-*



*pus*, which Inconveniences are well enough avoided by leaving the Aperture open, and in such a Situation that the redundant Pus may find a Vent from its own Gravity. We are, therefore, to use due Care and Caution, that the open Abscess be

*Kept guarded from the Air, and unmolested with Tents.* When the Abscess is open'd, though all the Pus be evacuated, yet in the Space of twenty-four Hours, and sometimes sooner, will there be a new Collection of Pus, which must in like Manner be discharged. And this was the Reason why the Surgeons, being apprehensive that the Aperture would close too soon, used to introduce Tents into it, by way of Prevention: But such Tents, being made of dry Lint, absorb the contiguous Humours, which causes them to swell; and being of a conic Figure, they are soon after squeezed out; or, if retained by the Application of Plaisters or Bandages, are dilated, and stop up the Orifice like a Cork, so preventing all Discharge of the collected Pus, and leaving it to work out for itself sinuous Ways and Cavities in the *Panniculus Adiposus*, a Membrane very capable of Dilatation. Besides, these Tents, while swelling with the absorbed Humours, insensibly widen and dilacerate the Sides of the Orifice, whence a new Pain and Inflammation are often occasion'd. It is plain, then, that the Use of Tents in these Cases is either useless or prejudicial; and even while the Dressing is renewing, and the Tent extracted, after the Pus is discharged, a very free Access is admitted for the Air into the now empty Cavity, which cannot but be very prejudicial by its Appulse to the gaping Orifices of the extremely thin and tender Vessels, as is observed under the Articles *VULNUS* and *CAPUT*.

The best Way, therefore, will be to cover the Aperture with a simple Pledget only, that the Pus may have free Liberty to discharge itself, taking due Care, also, that neither the Bandage nor Plaisters press hard upon the Orifice; on the contrary, it will be rather advisable to compress, though gently, the adjacent Parts, by a dextrous Application of Bolsters or Bandage, that the Pus may be derived towards the Orifice, which is to be kept open, and free from all Manner of Pressure. The Usefulness of Tents in open Abscesses, seems long ago called in Question by *Celsus*, *Lib. 5. Cap. 28.* where he says, "Then [after opening] if they be seated in the Groins or Armpits, they are to be dressed without Tents. In other Parts, also, if the Bottom of the Wound be but small, the Suppuration but moderate, and has not penetrated to a considerable Depth, if there be no Fever, and the Body be strong, the Use of Tents is equally superfluous. In other Cases they are to be used, though sparingly, and not unless the Ulcer be large." See more concerning the noxious Use of Tents under the Article *THORAX*.

Then let it be treated with Cleansers, Suppuratives, Digestives, Balsamics, Deterfives, and Dryers, vary'd as the present Exigence shall require, according to our Instructions under the Article *VULNUS*.

We are now to treat of those curatory Indications comprehended under the two last Numbers of the first Head of this Article, which are, to mundify the Ulcer, and reduce it to the State of a simple Wound: For the whole internal Superficies of the hollow Abscess having been macerated in the contained Pus, is generally, as was before observed, much injur'd by it. It ought, therefore, to be mundify'd, and a Separation to be made of all those Particles, both fluid and solid, which are corrupted to such a Degree as to prevent an Union of the separated Parts. But the Superficies of an Abscess is render'd most impure, when the Pus, by long Retention, has degenerated from its mild and friendly Quality; for in such a Case it frets and wastes both the incumbent Skin, and the adjacent Parts of the *Panniculus Adiposus*; and certainly, Cavities with so foul a Superficies can never be consolidated, unless they be first cleansed. This appears to be the Opinion of *Galen*, *M. M. ad Glaucon. Lib. 2. Cap. 9.* "When the Skin, he says, is so wasted by the Suppuration as to resemble Cloth worn to Rags [*ὡς χαλῶδες γυτάριον*, to look ragged;] it is with Difficulty brought to a Coalition with the subjacent Bodies, and therefore the Ulcer must of Necessity be cleansed by enlarging the Vent for that Purpose." The Methods and Remedies for depurating a sordid Ulcer, and reducing it to the Condition of a pure fresh Wound, are largely describ'd under *VULNUS*.

If the Patient be shock'd at the Sight of the Instrument, and refuses the Operation, apply a Caustic to the Part; let the Eschar be separated, by mollifying it with Butter; and let the Cure be managed as directed under the two preceding Heads.

The safest Way of opening an Abscess, is by the Incision-knife; but sometimes the Surgeon has to do with Persons of

so pusillanimous a Temper, that they are ready to faint away at the bare Mention of the Operation. In such a Circumstance, it is best to use Deceit, and dextrously to perforate the Abscess while the Patient has not the least Apprehension of it. Various Kinds of Instruments have been contrived for this Purpose: Some have concealed a small Lancet in a Ring which they wore on their Forefinger, or have cover'd the Top of a Lancet affix'd to a Plate of Metal, under a Cataplasma, or Ointment, which they have apply'd to the Part, and by gently pressing it, have effected what they design'd. More Artifices of this Kind are to be met with in *Paré, Livre 7. Chap. 10.* and others. If the necessary Aperture of a mature Abscess cannot be accomplish'd by any of these Contrivances, there remains no other Way than to apply to the mucronated Top of the Abscess what the Surgeons call a potential Caustic; of which there are several Sorts prepared in the Shops, and describ'd with their Use under the Article *CAUSTICA*. The *Lapis Infernalis*, or the common Corrosive of the Surgeons, prepared of Quick-lime and Potash, are mostly in Use. A Plaister is apply'd, which has a Perforation in the Middle answering to the Place on which the Caustic is to be laid; to this Perforation they apply the Caustic, and cover it with another Plaister, and let the Dressing remain for an Hour or two, till an Eschar of a sufficient Thickness be raised. This done, they attempt a Separation of the dead Eschar from the quick Parts, by Means of Basilicon, fresh Butter, or the like mollifying Topics; which being effected, the Pus is evacuated by the Aperture thus procured, and the Cure is performed by the Methods before prescribed. It is certain, however, that such pusillanimous Patients as require this Method of laying open an Abscess suffer much greater Pain; for the Division of a mature Abscess by the Incision-knife is performed in a Moment, but the Action of a Caustic requires an Hour, and often more; and when that is done, the Patient endures a good deal of Pain while the Eschar gradually separates from the quick Parts; and, besides, a greater Defecation, and more unsightly Cicatrix, generally result from the Application of a Caustic. *Vanfweiten, Comment. in Boerhaavii Aphorism.*

#### PREDICTIONS FROM A SUPPURATION OF THE LUNGS.

"Those who have a Collection of Pus, says *Galen*, *Com. 2. in Prognost.* whether within the Body, or in any Part affected with an Inflammation, and even after an Eruption, we may properly enough call *Empyri*," that is, purulent or suppurated; "but Physicians usually give that Name to those who have the Thorax or Lungs thus affected." In this Case, the Pus, after Eruption, is contained between the Thorax and Lungs; and if it be not speedily expectorated, the Patient dies of a Consumption, labouring all the Time he lives under a slow Fever, and a constant Exacerbation of the Heat and other Symptoms at Night.

The Ancients called a Collection of Pus in any Part of the Body *Empyema*; and hence suppurating Medicines were by some called *Empyemata*, by others *Diapyemata*. Some give the Name of *Empyri* to those who have Pus collected in any one of the Viscera: And others, as was said, will have that Name appropriated to such as have a Collection of Pus between the Thorax and Lungs; that is, in the Part affected with an Inflammation, and from an Effusion of the Pus within the Thorax, arises this Affection.

Pus of this Kind is generated when the Matter of the Phlegmon is not absterged, in which Case the Contents are, by the Heat, converted into Pus. And this we find expressed by *Hippocrates*, *7 Aph. 38.* where he says, that Distillations "upon the upper Belly [*ἐπὶ τῇ ἄνω κοιλίᾳ*] come to a Suppuration in twenty Days;" and more clearly to the purpose, *5 Aph. 8.* "They who labour under a Pleurisy, if there be no Repurgation of the Matter in fourteen Days, become affected with an *Empyema*." For where the Matter which causeth the Pain is not discharged by Expectoration, nor by Stool, nor Venesection, nor Diet, nor Medicine, it either turns to a Suppuration, or suffocates the Patient. And this is well expressed by *Galen* on the *Prognostics*, in the following Words: "Whoever, he says, are affected with Pains in the Thorax near the Seat of the Lungs, which will not yield to Remedies, and have no other Disorder, nor any mortal Symptom, may expect a Suppuration." When an Inflammation, therefore, becomes suppurated, and the Humors are converted into Pus, these, if not evacuated by Spittle, are, by a Rupture of the Impostume, discharged into the Cavity of the Thorax and Lungs, in which Case the Patient may truly be said to be *Empyri*; and by this Pus he is suffocated, or thrown into a Consumption; or freed from it in the Space of forty Days, by the Help of a Cough, according to *Hippocrates*, *5 Aph. 5.* where we read, "that whoever are affected with an *Empyema* after a Pleurisy, and are cleansed by Expectoration in forty Days after the Rupture,"



“ ture, are freed from the Disease.” But as *Galen* says in his Comment, “ If all the Pus be not discharged by spitting “ in that Space of Time, it putrifies, and being putrified, “ corrodes the Lungs, and induces a *Tabes*,” which is an Extenuation of the whole Body, occasioned by those incurable Ulcers of the Lungs, in Conjunction with a slow Fever, which the *Greeks*, and particularly the *Albepians*, as *Galen* says, call by the proper Name of *Phthoe*, and *Hippocrates* *Phthifis*. When the Patient in this Case is reduced to Extremities, and the Case desperate, the Hair falls off by reason of Dryness, there is a Looseness of the Belly, occasioned by the Imbecillity of the retentive Faculty, as *Galen* expresses it, and the Spit is retained; for the Patients, however extenuated, live as long as they can clear their Lungs, by Coughing and Spitting; but when these cease, and the Matter which should be expectorated remains within, the Passages for Respiration are obstructed, and the Patient is suffocated.

For the better understanding the Prognosis to be formed from a Suppuration, we are to consider, first, whether the Patient be subject to it from a Pleurisy, Peripneumony, or Quinsy; then, from what Signs we suspect a Suppuration; thirdly, when the Eruption is like to be made; and lastly, of the Signs from which we may predict the Death or Recovery of the Patient.

From what Signs we may reasonably expect a Suppuration, we are taught by *Hippocrates* in his *Prognostics*, where he says, “ that Pains in those Parts (about the Region of the Lungs) “ which yield not to Expectoration, Purging, Phlebotomy, “ Diet nor Medicines, terminate, you may be certain, in a “ Suppuration.” But because the Pain and Fever are more urgent about the Time of the Generation of Pus, than when it is actually generated, according to *Hippocrates*, 2 *Aph.* 47. it is necessary that the Symptoms should be increased in the Progress of the Suppuration. On this Subject we are directed by *Hippocrates*, in the *Prognostics*, “ to consider that “ the Beginning of the Suppuration commences from the “ Day in which the Patient began to be feverish, or was “ seized with a Rigor, or the Time when he first said “ that he had a Weight instead of a Pain in the Place affected; for from such Times are we to date the Suppuration.” And *Galen*, in his Comment on the Place, says, that the Signs of a Suppuration are a Gravitation or Weight, instead of the Pain, a Rigor or Horror, and a Fever, which is more urgent on the Patient than before: He adds, that besides the Sense of a Weight, there is also a Pain in the Sides, or in one Side, if the Suppuration be only in one Side; which is agreeable to the Directions of *Hippocrates*, in the Book just quoted, where he says, “ If the Suppuration be only in “ one Side, it will be proper to turn the Patient, and learn “ of him whether the Pain be in one Side, and whether it “ be hotter than the other; and whether when he lies on the “ sound Side, there seems to be a Weight lying on the other; “ for if this be the Case, the Suppuration is on that Side, which “ soever it be, where the Weight is.” By these Signs, then, may we discover a Suppuration, which is indicated by a Rigor or Horror, proceeding, as *Galen* says, from the Acrimony of the Pus infecting the Parts affected with the Inflammation, from the great Increase of the Fever, and the Weight in the Sides, or in one Side only, if the Collection of Pus be only in one Side; to which we may add a Sense of Heat in both Sides, or only in one, if the Pus, as we said, be collected only in one Side. And if this Pus, after its due Increase and Concoction by Nature, makes an Eruption, and is expectorated by Coughing, the *Empyos*, or Person affected with the Pus, recovers; but if the Pus can by no means be discharged, as it happens in great Weakness of the Parts, the Patient is either suffocated, or dies at last of a Consumption. Hence it is observed by *Hippocrates*, in his *Prognostics*, that this Disease is “ more fatal to the Aged than to young Persons.” And the Reason is, as *Galen* says, “ because old Persons are weaker, and “ great Strength is required in order to discharge the Pus, by “ Coughing and Spitting; and it is necessary for Recovery, “ that great Quantities of Pus should be expectorated by “ means of a Cough.” *Galen*, *Lib. 5. de Loc. affect. Cap.* 3. speaks of some *Empyos*, who spit out no less than fifteen Hemines of Pus, and recovered. So that they who expectorate freely, and in large Quantities, escape, which is imported by what we read, 5 *Aph.* 15. before quoted. But when the Pus is not discharged, on account of the Grossness and Viscidity of its Substance, the Denseness of the Membrane in which the Lungs are contained, or the Weakness of the Faculty, which Defects are known by Respiration in which the whole Thorax is elevated, without any Sign of Expectoration by Spitting. Thus we are told by *Galen*, *Lib. 4. de Loc. affect. Cap.* 3. “ That the Elevation of the “ whole Thorax in Respiration by those who are affected “ with a Suppuration, on account of a Collection of Pus between the Thorax and the Lungs, proceeds from the Im-

“ becillity of the Patient, who is too weak to discharge himself from the offensive Matter. And if he escapes Suffocation, he dies of a *Tabes*, under all the Symptoms described “ in the Beginning of this Discourse.”

The Case of an *Empyos* under a *Tabes*, or Consumption, is thus described by *Hippocrates*, *Lib. Prognost.* “ All *Empyos*, “ he says, are known by the following Characters; first, if “ there be no Intermission of the Fever, which is more “ gentle by Day, and more violent by Night; if copious “ Sweats supervene, and the Patient has a Desire to cough, “ but expectorates nothing worth Notice; if there be a “ Holowness of the Eyes, a Redness of the Cheeks, a Crookedness of the Nails, a Heat especially in the Tops of the “ Fingers, a Tumor of the Feet, a Loss of Appetite, and “ an Eruption of Pustules about the Body.” *Galen*, in his Commentary on this Description, tells us, “ that the Fever “ has no Intermission, because the very solid Parts of the “ Body are heated, and retain a Heat somewhat like that of a “ continual Fever, and, after the manner of Lime, gentle “ to the Touch. And this Heat, which is esteemed a proper “ Sign of a Hectic Disposition, is increased as often as the “ Patient eats or drinks, as it is in Lime, by an Affusion of “ Water; so that the Parts feel much hotter to the outward “ Touch. The constant Sweats are from Weakness, and a “ Corruption and Dissipation of the Aliment. There is a “ Desire of Coughing, but nothing expectorated that deserves “ Notice, on account, as we said before, of the Grossness “ and Viscidity of the Pus, the Tenseness of the Membranes “ of the Lungs, or the Weakness of the Faculty. Hollow- “ ness of the Eyes is from Dryness, and is common to all “ long Fevers; Redness of the Cheeks is from Heat in the “ Lungs, and also from the Cough, by which the Face is “ heated. The Nails are incurved, because the Flesh “ which should support them is consumed, and the interior “ Parts of the Tops of the Fingers feel hotter than the “ rest, as being more fleshy, and because the hectic Heat, “ which possesses the solid Parts, is more sensible in these “ Parts which abound most with Moisture. The Feet “ swell, because the Extinction of the natural Heat begins in “ these Parts, as being at the farthest Distance from its “ Principle or Original. The Appetite is lost from an Extinction of the Faculty; and the Eruption of Pustules is “ occasioned by an Effusion of the corroding Sanies from “ the interior Parts on the Surface of the Skin.” These, then, are the Signs by which the *Empyos* are known to be in a Consumption; and though their Case be desperate, they live as long as they can excrete Pus, as we have already observed from *Hippocrates*, 7 *Aph.* 16. One thing in relation to this Spit, worthy Observation, is what *Galen*, in 3 *Epid.* affirms, that in desperate Consumptions nothing of Concoction can be perceived in it; but Spitting at last ceases, and is suppressed, a Looseness comes on, with a Swelling of the Feet, and other Symptoms, which shew the Case to be desperate.

As to the Time of Rupture of the Impostume, or Vomica, it is to be considered, first, that the Humor, which is the Cause of the Pleurisy or Peripneumony, not being evacuated or removed, putrifies, and is converted into Pus; in a short time after, that makes an Eruption, and is expectorated by Coughing; but as to the determinate Time when this Pus is effused between the Thorax and the Lungs, it happens generally in the Space of twenty Days, sometimes sooner, sometimes latter. The Thing itself, and the Signs by which it is known, are thus expressed by *Hippocrates*, *Lib. Progn.* “ As to the quicker or slower Rupture of the Vomica, they “ are known by the following Signs: If there be a Pain “ from the Beginning, and the Difficulty of Respiration, together with the Cough and Screation, continue, the Rupture “ may be expected on the twentieth Day, or even sooner; “ but if the Pain be more remiss, and the other Symptoms “ in proportion, the Rupture will happen later; but it is “ necessary that a Pain, Difficulty of Respiration, and “ Spitting, should precede the Eruption of the Pus.” From these Words *Galen* infers, that the Signs of a future Rupture, are a Pain, Difficulty of Respiration, Cough and Spitting, which, if they are continual and violent, promise a quick Eruption; if they are not so violent nor continued, the Eruption will be the slower. There is necessarily a Pain from the Pus obvolving and corroding the Part by its Acrimony, and the Cough and Screation are necessary from the thinner part of the Sanies, a corrupt Matter which lies upon and penetrates into the Part affected; there must, also, of necessity, be a Difficulty of Respiration, on account of the Condition of the whole Body, but principally from the acceding Pain.

The Cause of the Eruption is referred to the moving Force of Nature, and to the Redundance of Pus, or its depraved Quality irritating the expulsive Quality to its creation.



The Eruption happens before the Time, that is, before the Concoction of the Pus, from a Corrosion of the Bag which contains the Pus, by a pure Bile, which is unmix'd with the Spit, and not arrived at that Mediocrity of Temperament, which is due and convenient for Nature; hence a Pain, Cough, Difficulty of Respiration, and Spitting, precede an Eruption, either from the Plenty of Pus, or the Offensiveness of the Putrefaction irritating the expulsive Faculty. Such an Eruption before Maturity, is symptomatical, and not good, but that which is made by Nature, or when the Pus is concocted, is critical and good; and the Pus discharg'd appears white, pure, equal and smooth; whereas, in an Eruption which happens before due Time, and is symptomatical, the Pus is crude, parti-colour'd, fetid and yellow, or mix'd with Bile. Of such an Eruption the Author of the *Coac.* 392. speaks, where he says, "They who expectorate purulent and bilious Spit, either separately, or mixed together, generally die on the 14th Day."

These Things being premised concerning *Suppurations*, we are now to enquire into the Prognostics they will afford. And, first, as to the salutary Signs in those who recover, after the Eruption of the Pus, we are directed in our Judgment by *Hippocrates* in the *Prognostics*, where he describes the Symptoms which promise a good Event to the Disorder. "Good Signs, he there says, are, to bear up well under the Distemper, to breathe freely, to be free from Pain, to cough up the Spit with Ease, for the Body to be soft and warm in all Places alike; not to be afflicted with a Thirst; for the Urine, Stools, Sleep, Sweat, to be regular, and all in due Order as requir'd; in such Circumstances we may venture to pronounce the Patient will not die." And a little after he says, "They who recover are generally those who get rid of the Fever the same Day that the Eruption is made; who soon recover their Appetite, and are freed from their Thirst; whose Stools are small in Quantity, and compacted; and when the Pus is white, smooth, of one Colour, free from Phlegm, and expectorated without Labour or violent Coughing. The Patient in such Circumstances, is very happily and speedily freed from his Malady; and the nearer he comes up to this Character, the more likely he is to recover." The Symptoms portending Death in a Suppuration, are enumerated by the same Author in the Book before quoted, as follows: "On the contrary, (with respect to the good Signs before described) to bear up ill under the Disease; to breathe short and thick; to have no Remission of the Pain; to expectorate with Difficulty; to be very thirsty; for the Body to labour under an anomalous Fever; to have an extraordinary Heat in the Belly and Sides; for the Forehead, Hands and Feet to be cold; for the Urine, Stools, Sleep and Sweat, to be all bad and disorderly; the Patient will die under Expectoration, before the fourteenth Day, either on the ninth, or eleventh Day." And a little after the foregoing Passage, he says; "The Disease proves mortal, meaning after the Eruption, when the Fever ceases not, or if it soon recurs after a seeming Cessation; if the Patient be afflicted with a Thirst, Loss of Appetite, or a Looseness; if the Pus expectorated be of a greenish [χλωρόν] Colour, a palish Green, livid, or pituitous and spumous; if these concur, the Patient will not recover." For all these kinds of Spit are condemned, *Coac.* 390. And we have Instances of their Fatality, 4 *Epid. T.* 4. in the Wife of *Meander* the blind Man, who immediately expectorated a greenish and purulent Matter; and in the Son of *Amphirades*, 7 *Epid. T.* 24. who discharged first a purulent and pale, and soon after a greenish Spit; and in *Euryptolemus*, *ibid. T.* 16. whose Spit was of a pale Colour. To the same Purpose may be apply'd that of *Hippocrates*, 7 *Aph.* 44. "If those who are affected with an Empyema, and suffer Burning on Cutting for the same, discharge a pure and white Pus, they escape; but if the same be bloody, fetid, and fetid, they die." And so much shall suffice concerning Predictions from an Empyema, the Perusal of which may be of Service to the Student in Medicine. *Propter Alpinus de Progn. Vit. et Mort. Ægror.*

## SUPRA COSTALES.

These Muscles are commonly called *Levatores Costarum*, which Name was first given them by *Steno*; but he did not pretend to have discovered them. They are irregularly triangular, and situated on the back Part of the Ribs near the Vertebrae.

Each of these Muscles is fix'd by one tendinous Extremity in the transverse Apophysis, which lies above the Articulation of each Rib, and to the neighbouring Ligament; the first being inserted in the transverse Apophysis of the last Vertebra of the Neck, and the last, in that of the eleventh Vertebra of the Back.

From thence the fleshy Fibres run down obliquely, increasing in Breadth as they descend, and are inserted in the back

Part of the Outside of the following Rib. Some of the Fibres often pass beyond that Rib, and are fixed in one or more of the Ribs below it, by several Digitations, which lie at a greater Distance from the Vertebrae, in proportion as they run lower. In the inferior Ribs these Digitations are more considerable, than in the superior. *Winslow's Anat.*

For the Uses of these Muscles, see the Article INTERCOSTALES.

SUPRASCAPULARIS MUSCULUS. The same as SUPRASPINATUS.

## SUPRASPINATUS MUSCULUS.

This is a thick narrow Muscle, in some measure pennisiform, filling all the supra-spinal Cavity of the Scapula.

It is fix'd to all the posterior half of the supra-spinal Fossa, and sometimes its Insertion reaches near the Neck of the Bone. There the Fibres leave the Surface of the Bone, and being as it were supported by the fat or cellular Substance, pass between the Acromium and Neck of the Scapula, under the Arch formed by the Acromium and Extremity of the Clavicle, and under the Ligament between the Acromium and Apophysis Coracoides; being afterwards inserted in the superior Surface of the great Tuberosity of the Head of the Os Humeri, very near the bony Channel. This Muscle is cover'd by the *Trapezius*.

The *Supra-spinatus* is commonly supposed to join with the *Deltoides*, in lifting up the Arm; this Muscle beginning that Action, and the *Deltoides* continuing it. But besides that this Muscle is very small, it seems to be too near the Articulation of the Head of the Os Humeri, to be able to raise the whole upper Extremity, which is of a considerable Weight and Length. It has, however, two other very remarkable Uses, when the Arm is raised from the Thorax to the Head by the Action of the *Deltoides*.

To understand these Uses it must be remember'd, 1. That the cartilaginous convex Part of the Head of the Os Humeri is much larger than the glenoid Cavity of the Scapula. 2. That the most superior Part of this Convexity lies out of the Cavity, when the Arm is depressed or near the Ribs. 3. That the orbicular Ligament of the Joint is very broad, being proportion'd to the Distance between the Edges of the convex Part of the Head of the Os Humeri, and of the glenoid Cavity of the Scapula; and that therefore it cannot check the Os Humeri in any of its Motions.

From thence it is plain, that the strong deltoide Muscle, in the first Instant of its Action to raise the Arm, would thrust the Head of the Os Humeri upwards out of the Cavity, if something did not supply the Place either of a bony Fulcrum or ligamentary Frænum. The Arch of the Acromium is of no Use in this Case; for the Bone must be first luxated, before it can reach so far; and the neighbouring Parts must suffer a Friction, and even a Contusion, which would be very prejudicial.

It is, also, plain, that the broad orbicular Ligament would be very subject to be intangled and bruised between the Edges of the two articulated Bones, were not this Inconveniency prevented by some means or other; because it is not elastic enough to contract of itself in proportion as these two Edges approach each other.

The *Supra-spinatus* answers both these Ends. When it contracts its Tendon, which runs over the convex Part of the Head of the Os Humeri, to be inserted in the upper Surface of the great Tuberosity, it presses very strongly on the Head of the Bone, thereby supplying the Place of a Fulcrum, and hindering the Head to rise, during the Beginning of the Action of the *Deltoides*.

I find, also, in this Muscle, a singular Contrivance to prevent the second Inconveniency. Its Tendon is a kind of Band, which adheres closely to the Outside of the orbicular Ligament; and when we examine it narrowly, we observe that several of its Fibres do not go so far as the Head of the Os Humeri, but are gradually inserted in the outer Surface of the Ligament. These tendinous Fibres are continuous with those which lie nearest the Bone or Bottom of the supra spinal Cavity of the Scapula.

This Portion may, therefore, be reckoned a distinct Muscle belonging to the orbicular Ligament, notwithstanding of its close Union with the other Part, which is inserted in the Os Humeri. And indeed we might very justly establish a new Species of Muscles, by the Name of Articular Muscles, which belong principally to the capsular Ligaments of those Joints which have large Degrees of Motion. The Mechanism of this kind of Muscles consists in this: The Extremities of the Tendons are inserted very obliquely in the Surface of the Ligament, and the Fibres take up a great deal more Space there, than in the Body of the Tendon; and they are commonly the innermost, or deepest and shortest Portions of the ordinary Muscles inserted near the Articulations.



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The Use of these Muscles, or Portions of Muscles, is to pull the orbicular Ligaments uniformly, and thereby to prevent their running into irregular Folds, and their being intangled between the two articulated Bones. *Winslow's Anat. SURIANA.*

The Characters are ;

It hath rose-shaped Flowers, consisting of several Petals, which are placed in a circular Order ; from whose Empalement arises the Pointal, which afterwards becomes the Fruit, which generally consists of four Capsules, in which are included four roundish Seeds.

We know but one Species of this Plant, which is,

*Suriana foliis portulacæ angustis, Plum. Nov. Gen.*

This Plant was so named by Father Plumier, who discovered it in the French Settlements in America, in honour to Dr. Joseph Surian of Marseilles, who was a very curious Botanist.

The Seeds of this Plant were brought from Havana, by the late Dr. William Houshoun, who found the Plants growing there in great Plenty on the Shore, in moist Places, where the Salt Water usually flows. It also grows plentifully in some Parts of the Island of Jamaica. *Miller's Diet.*

SURRECTORIUM. An Instrument, mention'd by Paré, for keeping the Arm, when injur'd, in an erect Situation.

SUSINUM. See ÆGYPTIUM OLEUM.

SUSPENDICULUM. A Name for the CREMASTER MUSCLE.

SUSPENSOR TESTICULI. The same as CREMASTER.

SUSPENSUM. The same as ENÆOREMA.

SUSPIRIUM. An ASTHMA.

SUTORIUM ATRAMENTUM. Vitriol.

SUTRATAR, in Paracelsus, is a splenic Medicine; or one prepared of a Spleen.

SUTURA. A Suture, in Anatomy, is a particular Articulation of the Bones of the Head. See CAPUT. But

SUTURA, Suture, in Surgery, is the uniting the Lips of a Wound by Sewing.

But there are two Methods of closing Wounds by Suture ; one with a Needle, called the true or bloody Suture ; the other with adhesive Plaisters, called the dry or false Suture. Sutures are not to be used in all Wounds indiscriminately ; but, 1. Principally where the Lips of the Wound cannot be brought into Contact by the Dressing ; such are transverse, oblique, and angular Wounds, when they are recent and carefully cleared of the Blood and any foreign Substance which may be lodged in them. 2. In those, also, where there is nothing contused, abraded, or cut away ; unless perhaps the wounded Parts are greatly relaxed. Sutures are in such Wounds of great Advantage, not only making them soon heal, but also inducing a smaller and neater Cicatrix. The adhesive Plaister, or dry Suture, is beneficial in those Wounds which are neither very deep nor very broad, especially in the Face, tho' some prefer the Needle ; but the Judgment of the Surgeon may, in this Particular, be best directed by the Nature of the Wound. For when the Lips of the Wound may be held together by a Plaister and Bandage, the Needle becomes unnecessary, which occasions more Trouble, and also new Wounds and Cicatrices. But on the other hand, when the Wound is wide and deep, so that its Lips cannot be closely retained by Plaisters and Bandages, or where the Part is nearly amputated, as in the Nose, Ears, Cheeks, Forehead, Chin, or Fingers, immediate Recourse must be had to the Needle.

It is proper to observe, 1. That when the Lips of the Wound are joined by adhesive Plaisters, the Hair must first be carefully shaved from the Part. 2. Where one Plaister is not sufficient, more may be used, or they may be applied cross-ways, (as in Tab. 25. Fig. 4, 5, 6.) 3. The true or bloody Suture is of two Sorts, simple or compound. The simple Sort is done with a Needle and Thread, comprehending the knotted, glovers and circumvolved Sutures, and the Suture of the Tendons. The knotted Suture is so called from the many Knots that are used in it ; the Glovers Suture from its Resemblance to the Glover's Stitch ; and the circumvolved Suture is so denominated, because the Lips of the Wound being transfixed by the Needle, the Thread is wound about for conjoining the Lips of the Wound more firmly ; as is used in curing the Hare-lip (See Tab. 25. Fig. 21, 22.) The Suture of the Tendons is used when the Tendons are divided. Besides, there are several other Sorts of Sutures used by ancient Surgeons, as the Sutoria, Sartoria, Celsiana, (See Tab. 25. Fig. 19) and the Clavata made with Quills or small cylindrical Pieces of Wood ; but these are long ago disused, except the Sutura Clavata, which was lately revived by Palfyn and Garengot, with little Variation, only instead of Quills or Pieces of Wood, they recommend waxed filken Cylinders. 4. It must be remember'd, that in Sutures of deep Wounds a small Tent must be left in the lower Part of the Wound, till it

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be thoroughly cleansed, that the Healing may begin at the Bottom.

The Plaisters in the dry Suture must be of a sufficient Length, and shaped according to the wounded Part, so as to encompass great part of the Wound, though not entirely, lest they should retard the Circulation of the Blood, and induce Tumors and other Mischiefs. They must, also, adhere firmly, which Purpose is well answered by the Plaister of *Andreas a Cruce*, or the styptic Plaister of *Crollius*, or the Plaister of *Diachylon*, or of *Diapalma*, mixed with Turpentine, and spread on a Piece of strong Linnen. The Discharge of Blood being stopt, and the Wound deterged, a vulnerary Balsam must be instilled into the Wound, such as the Essence of Mastich, Amber, of the Peruvian Balsam ; or the *Balsamum Commendatoris*, or any balsamic Composition of the gummy kind, which soon form a kind of balsamic healing Crust, denying all Access to the Air, and promoting the Agglutination. Then apply the Plaister of a sufficient Length and Breadth, or two or more if necessary, either strait or crooked, leaving Spaces between them ; first lay it warm upon one Side of the Wound, pressing it with the Palm of the Hand to make it adhere, and then press the disunited Lips of the Wound gently and equably together ; and being thus joined, let them be kept firm by fixing the other End of the Plaister on the other Side of the Wound, then apply pieces of Linnen dipped in any of the Balsams above specify'd, and secure the whole with proper Compresses and Bandages.

According to *Petit's* Method the agglutinating Plaisters should have one Hole in the middle, or more, according to the Size or Figure of the Wound, (See Tab. 23. Fig. 11. and Tab. 25. Fig. 7.) that by these it may not only be discover'd, as in the former Method by the Interstices between the Plaisters, whether the Lips were properly joined, but the Wound may be daily supplied with proper Remedies. These Plaisters are applied in the same manner as the others, and must be continued on the Wound till the Part be near healed. The dry Suture may be also made in the following manner. Make two Plaisters of any of the Prescriptions abovementioned, on strong Linnen Cloth, answering to the Largeness, Depth and Width of the Wound ; the deeper Wounds requiring longer, and the slighter shorter Plaisters ; fasten to the Border or Edge of each piece of Linnen, three or four Tape-strings, according to the Length of the Wound, and after having warmed the Plaisters, lay one on each Side of the Wound, at the Distance of a Finger's Breadth from it, so that the Remedies may be conveniently applied, as represented in Tab. 25. Fig. 8. Then the Lips of the Wound are to be joined, and dressed as before directed ; and while an Assistant carefully keeps the Lips in Contact, let the Surgeon tie the Strings of the Plaisters together, first in a single Knot, and then a slip Knot, and thus will the Lips of the Wound be kept properly united. Over each Plaister should be laid an oblong Compress, and over them a large square one, securing the whole with a proper Bandage. Next Day the Wound must be inspected ; and if the Strings appear to be relaxed, they must be drawn tighter. But if they are not loosened, they ought to be left untouch'd ; then apply a piece of Linnen, moisten'd with some Drops of a healing Balsam, and afterwards the Compresses and Bandage as before. Some, instead of Tape-strings, use Iron or Brass Hooks and Thongs, as is represented in Tab. 25. Fig. 9, 10. These Plaisters are fixed to the Lips of the Wound in the same manner as the former, and then with a Thread or Thong, passed through the opposite Hooks, they are drawn together, and the Lips of the Wound are brought into Contact. But as these latter kinds of dry Sutures require more Time and Trouble, they are, therefore, less used than the first Sort.

If the Wound be broad and deep, or transverse, as frequently happens in the Thigh, (See Tab. 24. Fig. 1. Let. H.) or in the Abdomen, in the Nates or Arms ; or where a Piece hangs down from the wounded Part, as in the Forehead, Cheeks, Nose, Chin or Ears ; or when the Wound is angular or crucial, as in Tab. 25. Fig. 12, 13, and 17. the true or bloody Suture is to be used. Sutures of this Kind, as we have already observed, are distinguished by simple and compound. Of the simple true Sutures, the convoluted or twisted Kind is seldom used, except in the Hare-lip ; the Glovers Stitch is performed in Wounds of the Intestines ; and the knotted Suture in all other Wounds, which require a true Suture. The compound Suture is so called because other Things become necessary besides a Needle and Thread.

The best Method of making the knotted or interrupted Suture (I think) is the following. Take a double Thread well waxed, or six small Linnen Threads, and pass them through a strong crooked Needle. (See Tab. 22. Fig. T. 5.) With this Needle, pierce at once the two Lips of the Wound (which we now suppose two Inches long) about the Middle,

pro-



proceeding from the exterior Part of the inferior Lip, towards the Bottom, to the interior Part of the superior Lip, so that the external Perforations, through which the Thread appears, may be about the Breadth of a Finger from the Lips of the Wound, or more or less according to the Size of the Wound. Then removing the Needle, and compressing the Lips of the Wound, tie the Ends of the Thread, first in a single Knot, and then in a slip Knot, so that the Lips of the Wound may be properly brought into Contact; then dress as in the dry Suture. If the Wound should be longer, and one Suture is not sufficient, two, three, or more may be made (See Tab. 25. Fig. 11; and 16.) in the same manner, but so as to be at the Distance of an Inch from one another. Besides, that the Wound may not be hurt by the Knots, the Threads are to be so tied, that after the first Knot, a small Compress (See Tab. 23. Fig. 22.) of Linnen or waxed Silk, may be laid on it, over which let the second Knot be tied, which must be made to slip, that it may more easily be untied and relaxed, should Pain or Inflammation happen.

In this Method we proceed, when the Wounds are oblique or transverse; but when the Wound has Angles, or is triangular, (see Tab. 25. Fig. 13.) the Suture must be first made in the Angle A. Like Sutures must, also, be made about the middle of the Sides of the Wound, as at B and C. If the Wound has two Angles, like the Greek Letter  $\pi$ , as in Tab. 25. Fig. 14. which frequently happens in the Face, especially in the Forehead, then a Suture must be made at each of the Angles A A. If these are not sufficient, because of the Largeness of the Wound, two more will be necessary, about the middle of the Sides at B B, or perhaps more. When the Figure is crucial, or in the Form of the Let. X. as in Fig. 6. and 12. and its Lips cannot be brought into Contact by Plaisters, the Needle (as in Fig. 12) must first be introduced at A, so as to come out at B; and it must again enter at C, and be brought out at D; then the Lips must be gently drawn together, and the Knot tied between A and D.

Instead of this simple Suture, some of the ancient Surgeons used the compound, or clavated Suture, called by the French *Suture enchevillée*, in large Wounds. This Suture they preferred to the others, because by them the Lips of the Wound were sometimes lacerated, which not only obstructed the Agglutination, but induced great Inconveniencies. But though the clavated Suture has been disused for several Years, and is expressly said by *Dionis* to be improper, yet some Moderns (especially *Palfyn*, in *Chirurg. Cap. 6. de Suturis*, and *Garengot*, in *Chirurg. Cap. de Suture et Gastroraph.*) have again introduced it into Practice, and in various Cases preferred it to the knotted Suture; but with this Difference, that instead of two Pieces of Wood used by the Ancients, the Moderns take small Pieces of waxed Linnen or Silk rolled up like Cylinders, as long as the Wound, and about the Thickness of a Goose-quill. (See Tab. 25. Fig. 17.) By these means, the Lips of the Wound are prevented from being lacerated by the Threads; nor are they so rudely pressed as by the Pieces of Wood, which frequently excited Tumors, Pain and Inflammations. *Palfyn's* Method of performing this Operation, in deep Wounds of the muscular Parts, was thus: He took a large strong crooked Needle, in which was a strong double Thread well waxed, (as in Tab. 25. Fig. 15.) making a Noose; this Needle being passed through both Lips of the Wound, as before directed: And a second or third Needle being threaded and passed in the same manner, (see Fig. 17.) he introduc'd one Cylinder or waxed Roll, through the Nooses, as at B B; then having removed the Needles, he placed another Cylinder between the Ends of the Threads upon the other Side, and having brought the Lips of the Wound into Contact, drew the Ends of the Thread gently and equally, and tied them over the Cylinder, B B, first in a single and then in a slip Knot, as at C C C. If there be three Threads, tie the middle Thread first, and then the others.

*Garengot* perform'd this Suture nearly in the manner now described, but with this Difference, that instead of a double Thread, he used a peculiar Sort of Lace, made of six or eight clean white Threads, joined together and waxed, and more or less strong, according to the Largeness and Depth of the Wound; observing always so to proportion the Size of the Lace to the Needle, that it may readily follow the Needle, otherwise great Pain may be produced. When in this manner he has introduced as many Laces as may be necessary, he ties a Knot on the Extremity of each Lace, which hangs out from the upper Lip of the Wound; then he separates the Threads which compose the Lace, between the Knots and the Lip of the Wound, keeping an equal Number on each Side; and thus Nooses are made, through which the wax'd cylindrical Roll may be introduced. Then placing two Fingers on the inferior Lip of the Wound, near the Punctures of the Needle, with the other Hand he gently draws

the Laces, beginning with the Middle, if there are three, till the Lips of the Wound are exactly brought into Contact. Then separating in two Parts the Threads of each Lace, in the lower Lip of the Wound, which serve for tying the other Roll, he first made a single Knot on the middle Lace, after having carefully conjoined the Lips of the Wound; then having tied a single Knot on each of the other Laces, carefully observe that they be not made too tight, which might excite an Inflammation, and then secure all with a Slip-Knot made over each of the single Knots. Then let the Wound be treated with some vulnerary Balsam, especially the *Commanders Balsam*, applied with scraped Lint, which soon produces a kind of balsamic Crust, and by these means the Access of the Air to the Wound is prevented, and the Cure promoted. Apply also a Compress dipped in some warm, succulent, digestive Liquor, and a proper Bandage.

On the first Days, by whatever Method the Suture was performed, the Compress and Bandage must be removed with great Caution, and the State of the Wound examined. If all Circumstances appear favourable, if there be no Pain, or at least none violent, the Sutures are to be let alone for six or seven Days, or longer, and must be dressed as before, till the Wound appears to be conglutinated. If at the first Removal of the Dressings the Sutures appear too loose, the Knots must be untied, and the Threads straitened; but if the Sutures are too tight, they must be relaxed. When the Lips of the Wound appear swelled, and in some measure confused, a Suppuration must be excited with some digestive Ointment, or *Arcaus's* Balsam; and these Remedies must be continued for some Days; and thus these Disorders, or any other threatening Inconveniencies, are generally removed. But when the Inflammation appears violent, and a Fever is brought on, the Sutures should be a little relaxed, and the Wound dressed with a digestive Ointment, or *Arcaus's* Balsam; the Patient must also be bled, the Body must be render'd soluble with Clysters, and thin aqueous Drinks are to be recommended, with other Remedies proper in an Inflammation and fever. These Disorders being removed, the Sutures must again be gradually tightened, and the Wound dressed as above directed. But if these Remedies prove ineffectual, and the bad Symptoms not only continue, but daily increase, so as to appear dangerous, the Sutures must be cut, and the Wound treated in the same manner as if there were a Loss of Substance.

But if by these means the Wound is conglutinated, which may be known not only by the Concretion of the Lips, but also by the Laxity of the Threads, a grooved Probe must be introduced between the Lips of the Wound and the Sutures, if necessary; and the Sutures must be cut with Scissars near the Knots; then the inferior Lip of the Wound must be supported with one Hand, and taking hold of the Knot with the other, the Thread must be gently extracted. The small Wounds, occasioned by the Punctures of the Needle, may now be easily cured, by injecting into them some vulnerary Water, as the Aqua Sclopetaria, Lime-Water, or Spirit of Wine, and applying Compresses dipped in the like Liquors: But if the Wound be large, it is to be anointed with the Balsam of *Arcaus*, or another of the like Nature, and its Lips kept in Contact by an adhesive Plaster, till a firm Cicatrix be induced.

In large Wounds of the Abdomen, some Surgeons greatly prefer the quilled or clavated, to the knotted or interrupted Suture; because the Muscles of this Part are greatly agitated by Respiration, Rising, Sneezing, Coughing, and the like; by which violent Motions the small Threads have sometimes torn the Lips of the Wound, and great Mischiefs have ensued.

*Garengot* recommends this Suture even in Wounds that penetrate the Cavity of the Abdomen, and directs the following Method of performing it. Having threaded the Needle, delineated at Fig. 6. Tab. 27. the Surgeon takes hold of it about the Eye in his Right Hand, and introducing the Thumb of his Left Hand into the Wound, he claps the Fingers of the same Hand on the external Part of the superior Lip of the Wound, which he elevates; then he enters the Point of the Needle into the Abdomen, and passes it through the Peritonæum, Muscles, Fat and Skin, about two Finger-breadths from the Lip of the Wound. He then removes the Needle, and fixes it to the other End of the Thread. Then introducing his fore and middle Fingers into the Wound, below the inferior Lip, and keeping his Thumb on the external Part, he raises this inferior Lip, and pierces it with the Needle in the same manner as before directed. If the Wound is about four Fingers-breadth in Length, two Stitches are required, equally distant from one another, and from the Extremities of the Wound; and if the Wound be larger, more Stitches are necessary. The waxed cylindrical Rolls are to be introduced, as was already mentioned from the same Author, and the Wound dressed with *Ar-*



*cæus's* Balsam. The Abdomen must then be fomented with warm Oil of Roses, mixed with a little Spirit of Wine, especially about the Navel, and the Parts near the Wound; then a large Compress dipped in the same Medicine must be applied to the Part, over which may be laid another moisten'd with warm Oxycrate. These must be covered with a Piece of Flannel, soaked in an emollient Decoction, and the whole secured with the Bandage called the Napkin, which is to be hindered from slipping down by the scapular Bandage, represented in *Tab. 24. Fig. 1. C.* which ought also to descend lower than the Napkin.

When the Lips of the Wound appear to be well agglutinated, the Stitches may be cut, one after another, with Scissars, either at the same time, or on different Days, as the Circumstances indicate. Then the Threads being extracted, as we before directed, the Cure of the Wound may be completed by a vulnerary Balsam and adhesive Plaisters. But particular Care must be taken not to extract the Stitches too soon, which might occasion the Lips of the Wound to burst again, and induce many Mischiefs.

See *Celsus's* Method of performing the Suture of the Abdomen, under the Article ABDOMEN.

For the Suture of the Intestines, see ABDOMEN.

For the Suture of the Hare-lip, see LABIA LEPORINA.

See the Suture for a Trichosis at the latter Part of the Article ALCALI.

#### THE METHOD OF PERFORMING THE SUTURE OF THE TENDONS.

This Operation is performed by modern Surgeons in the Tendons of the Hands, in order to join them when they are cut, by which the Fingers are prevented from becoming rigid or motionless. This Suture may be performed, if the Tendon be not deeply seated, but lies near the Skin; such are the Tendons of the Thumb, and Extensor-Tendons of the Fingers on the Back of the Hand; the Flexor-Tendons of the Fingers, and the Extensors and Flexors of the Hand, situated near the Carpus: Of this kind, also, in the Leg, are, the Extensors of the Tibia below the Knee, the Tendon of *Achilles* above the Heel, and the like. On the contrary, the Tendons of the Palm of the Hand are so deeply seated, and consequently the Suture is so difficult to be performed, that I never heard of one Instance of this Operation in that Part. The ancient Physicians were great Enemies to this Method of Cure, because *Hippocrates* says, "That a divided Nerve, by which he meant Tendon, can never again grow or coalesce." And indeed, the most violent Disorders are sometimes caused by a slight Puncture of a Tendon. We may conjecture that this Operation was performed in *Galen's* Time, because he advises against it; and his Opinion was followed by the Generality of Physicians; and particularly by *Ambrose Paré*. However, *Avicenna*, *Guido de Cauliaco*, *Salicetus*, *Rogerus*, *Lanfrancus*, *Brunus*, *Chalmetus*, *Andreas à Cruce*, and other ancient Surgeons, approved of this Operation; but their Successors seem either to have been ignorant of this Practice, or thought it too dangerous; till in the last Age, *Veslingius*, *Severinus*, *Felix Wurzius*, and other celebrated Physicians, especially *Maynard* and *Bienaisius*, both of *Paris*, *Purman*, and others, revived, and successfully performed this Suture; which succeeds best when the Wound is recent; though it may be beneficially undertaken the second, third or fourth Day, or longer, after the Wound has been inflicted; and sometimes, but with greater Trouble, even after the Wound has been healed up.

Before the Operation be undertaken, let it first be considered, whether the wounded Tendon requires a Suture. Sometimes it happens that the Suture is impossible to be performed, and sometimes it is attended with great Danger. In some Cases it may be practicable, but is unnecessary, when the Cure may be completed by proper Dressings. If a considerable Part of the Tendon be cut off, and the Extremities be lost among the Muscles, so as that they cannot be brought into Contact, then it will be in vain to attempt the Suture. If the divided Extremities of the Tendon are violently contused, by which great Inflammation and Pain are induced, and the Parts be thereby hindered from uniting and healing, the Suture would rather irritate and increase these malignant Symptoms. In this Case, therefore, as *Garengot* well directs, it may be proper to promote a slight Suppuration, and the Inflammation being abated, the Suture, if necessary, may be attempted. The same Author, after *Solinguus*, observes, that the Tendons of the Extensors in the Back of the Hand, may generally be united without Suture; if the Hand be extended, and the Fingers turned backwards, that the divided Parts of the Tendon may be brought into Contact. This Method, says *Heister*, I have often successfully tried, particularly in a Youth who had all the Tendons of the Extensors of the

Fingers, upon the Metacarpus divided. In this Case therefore, as well as when the Flexors of the Fingers and Hands, or the Extensors of the Toes are wounded, the Suture appears to me superfluous, if the Parts are so bound and retained, by Splints, Compresses, and Bandage, that the divided Extremities may be kept in Contact: But when the Tendons are only punctured, or perforated by a small Instrument, or when they are not thoroughly cut, or are violently contused, if violent Symptoms, such as Convulsions, be occasioned, and if these Symptoms will not yield to proper Remedies, such as Oil of Turpentine, either alone, or mixed with a few Drops of the distilled Oil of Amber, or of Lavender, it will be necessary to divide the wounded Tendon entirely; and the Symptoms being mitigated, it may be again sew'd up.

The Suture of the Tendons may be performed in the following Manner: The Member being first bent, or extended, as the Circumstances require, the wounded Part must be carefully inspected. If the superior Part of the Tendon, as is often the Case, be drawn up by its Muscle, and concealed under the Skin, so that it cannot be brought down to be penetrated by the Needle, an Incision must be made into the Skin, and other Integuments, sufficient to discover the Tendon, which must be gently laid hold of with the Forceps, drawing it a little downwards, and then the Tendon may be united by Suture; or if the Tendon be discovered, *Garengot*, as he thinks the Treatment with the Forceps too rough, advises to draw the Tendon down, by passing a Needle and waxed Thread thro' it; but the Use of the Forceps, in this Case, occasions no bad Consequences.

There are two Methods of performing this Operation; the first with one Needle, and the second with two. With one Needle, the Operation may be thus performed: Thread a straight, small, common, round, or flat-pointed Needle, (see *Tab. 57. Fig. 2. A A*) with a slender double Silk or Linnen Thread, but strong enough, and waxed, as at *BB*; make a thick Knot at the Ends of the Thread, as at *C*, and draw the Needle with the Thread through the Middle of a Piece of Leather, as at *D*, or such as is particularly represented at *Fig. 3. A. and B*, so that the Knot may not easily slip thro' the Tendon; (see *Fig. 4. A*, or *Fig. 7. D E*) then the wounded Hand, the Back of which is in some Manner represented in *Fig. 4.* must be extended flat on a Table, or thin Board, or a Piece of thick Pasteboard, that the divided Parts of the Tendon may be more easily joined together; then opposing the Canula delineated in *Tab. 29. Fig. 6.* Let *c*, or only the Point of the Forefinger to the Extremity of the Tendon which is divided, opposite to the Needle, we are to pass this Needle through the Middle of the superior Tendon about a Straw's Breadth, or two Lines, from the Extremity passing the Needle from the external to the internal Parts, as in *Tab. 57. Fig. 4. A*. After this, the Needle is, in like Manner, to be pass'd through the inferior Part of the Tendon, represented by *B*; but it must be directed from the internal to the external Parts: Then, as in the knotted Suture, applying either a small Compress, or Piece of Linnen Cloth, wrapt up, as in *Tab. 23. Fig. 22.* either with or without Wax, or a Piece of waxed Silk folded up in the same Manner, or a Piece of Leather, a simple Knot is exactly to be made above the small Compress, and then another, though a slipping and easily loos'd Knot; all the Parts of which Apparatus are in the Figure represented by the Letter *B*. Then the Wound being carefully cleansed, apply warm Oil of Turpentine, or Balsam of Capivi, or some other vulnerary Balsam, with Lint and Compresses, likewise using a Splint or Piece of stiff Pasteboard, shaped according to the Hand, (see *Tab. 57. Fig. 5.*) with Compresses for raising the Fingers backwards, and secure the whole with a proper Bandage. Instead of a straight Needle, the Surgeon may conveniently use a small crooked Needle, such as that represented at *Fig. 6.* which is flat about the Point *A*. If the Needle cannot be easily passed through with the naked Fingers, a Needle with a Handle may be used, as in *Tab. 27. Fig. 2, 3*. If the Wound has been inflicted some Days before, and the wounded Extremities of the Tendon appear to be indurated, which would render their Conglutination difficult, before the Ends are conjoined by the Suture, very thin Pieces should be cut off them with the Scissars; or if the Wound be mostly or entirely healed, it should again be opened by Incision, the Tendon must be carefully separated from the Parts to which it adheres, and then proceed as before directed.

*Garengot* imagined that he had greatly improved this Method; he strictly prohibits the laying of the Tendon bare, or bringing its Extremities into Contact with the Forceps, lest by both these Operations violent Symptoms should be excited; while, on the other Hand, the Patients are treated in a much milder and safer Manner, if the external Skin, together with the subjacent Tendon, be sew'd up, as we have already directed,



rected, and the Hand be kept extended with a proper Dressing. But that all these Measures may be the more commodiously taken, *Garengot* advises, that whilst others only use the Hands alone for this Purpose, we should employ the Instrument represented *Tab. 29. Fig. 6. L. c.* thro' which, after applying the Finger to the opposite Part of the Skin in order to secure it, we are to pass a Needle and Thread; and having passed the Needle through these Parts, we are to remove the Instrument: Then taking the Needle, we are to draw the Thread as far as is necessary, after which we are again to apply the Instrument, in order to perforate and bring into Contact the inferior Part of the Tendon in like Manner: For performing this Operation, crooked Needles are preferable to such as are strait; and plain Needles with an Edge on the interior Curve, as in *Fig. 6.* are preferable to Needles with Edges on both Sides, like the common ones represented in *Tab. 22.* by the Letters S T U; because, by the former, so many Fibres of the Tendon are not divided as by the latter. When the greatest Part of the double Thread is passed through the Integuments and Tendons, a Compress of Silk, spread with Wax, and wrapped up in a cylindrical Form, is to be fixed in this Thread as in a Loop, that it may secure the Ligature on the Lips of the Wound, as in *Tab. 57. Fig. 4. Let. C.* When the Thread is in like Manner pass'd through the inferior Part of the Tendon, and the two Parts are drawn so together as to have their Extremities laid one contiguous to the other, and a cylindrical Compress is placed between the Thread, as at D, the Whole is to be secured with two Knots, the one a single, and the other a slipping Knot. But it seems surprizing that *Vaugion*, *Verduc*, *Charriere*, and *Dionis* formerly, and, also, *Garengot*, should direct the Extremities of the Tendon to be laid one upon another, without offering any Reason for such Conduct, when it is evident, that the Agglutination must be impeded by this Method, as has been already remarked by the celebrated *Cruyer*, who happily reunited the Tendon of *Achilles* without observing this Circumstance. But if the divided Parts of the Tendon are become callous by the Wound being received a considerable Time before, the above-mentioned eminent Surgeons advise the Tendon to be separated from the contiguous Parts, and the indurated Extremities to be cut off; then proceeding in the Suture as before. This Suture may, also, be conveniently performed, by applying a square Piece of Leather, as in *Fig. 3. A B*, both to the superior and inferior Part of the Wound, as is shewn in *Fig. 7.* making a Knot, with a Compress under it. The most simple Method of performing this Operation is proposed by *Dionis*: Pass a proper Needle, with a single waxed Thread, through one Extremity of the Tendon, from without inwards; then pass it through the other Extremity from within outwards, at one Stitch, and then removing the Needle, tie the Thread with a round Compress under the Knot, so that the Extremities of the wounded Tendon may be conjoined. But to this, the former Methods are generally preferred.

The Suture of the Tendons with two Needles, was, as far as I know, first described by *Nuck* thus: Thread two small common Needles with one waxed Silk Thread, sufficiently strong, but moderately thick; pass both the Needles through the upper Part of the Tendon, *Fig. 4. E.* inwardly, and through the lower Part of the other End of the Tendon, as at F, outwardly, so that both the Perforations on each Part of the Tendon should be made towards the Sides of the Tendon, and near to the divided Extremities; then, removing the Needles, tie the Ends of the Threads, putting a Piece of Leather or small cylindrical Compress under the Knot, which are to be so drawn together, that the divided Extremities may be brought into Contact. By this Method, says *Nuck*, the Extremities of the Tendon are not so liable to be lacerated as in the preceding Operations, where only one Perforation is made in each Extremity of the Tendon, and the divided Lips are more firmly kept in Contact. The Suture being thus finished, he sprinkles on the Part the Powder of boiled Turpentine, and dresses it with *Arceus's* Balsam, or the common Digestive, taking Care so to dispose the Compresses and Splints, that the Tendon may be secured from Motion. Others prefer the former Method with one Needle, especially if the Suture is to be made in the Hand, because it may be done with more Readiness, and with less Pain and Trouble to the Patient: However, I think *Nuck's* Method is not to be entirely rejected. When there are several Tendons divided, the Suture is to be made upon each of the Tendons separately.

The Suture being finished, the Dressing must next be carefully performed. Lay in the Wound scraped Lint dipped in Oil of Turpentine, or *Peruvian* Balsam, or Balsam of Capivi, over which apply a Compress dipped in warm Spirit of Wine, and expressed. The Hand must be extended on a Piece of thick, stiff Pasteboard, (see *Fig. 5.*) with Compresses placed under the Palm, to prevent the Hand or Fin-

gers from bending inwards: This Piece of Pasteboard must be firmly fixed with a Bandage; the Arm must be wrapped up with Linnen Cloths moisten'd in Spirit of Wine, or warm Oxycrate. Some anoint the Arm with Oil of Earth-Worms, which is not improper. These Dressings must be repeated, till the divided Parts of the Tendon seem to coalesce, which may be known from the Laxity of the retaining Threads which must thereupon be cut, and carefully extracted: If the Pieces of Leather, Lint, or wax'd Silk, do not fall off spontaneously, they must be removed very gently. The Wound must be treated with a vulnerary Balsam, and scraped Lint, and the Hand must be kept extended on the Pasteboard, by which Means the Agglutination will be promoted. *Garengot* describes a particular Machine for retaining the Hand and Arm in a convenient Posture, with the Fingers extended, and a little reflected: But though this Instrument may not be improper, the same Intention may be answer'd by the Method above directed. If any Rigidity or Distension affect the conglutinated Tendon, it will be proper to rub the Part carefully every Day with the Ointment of Mallow-roots, the Oil of Worms, of *St. John's Wort*, or of Almonds, till it recovers its natural Motion. But it is surprizing, that not only the Antients, but even some of the Moderns, as *Arceus*, *Marchetti*, *Genga*, *Peccetius*, and other eminent *Italians*, should reject this Method of Cure; and some scruple not to assert, that all Accounts of the Success of these Sutures ought to be reckon'd fabulous, although there are Instances of the contrary given by Authors of undoubted Credit, among whom may be consulted *Kifnerus's Dissertation de Tendinum Læsionibus*, *Valentini's Surgery*, and *Goelicke de Tendinum Affectionibus*.

The Tendons of the Legs are no less liable to be divided than those of the Arms, especially the *Tendo Achillis*, and the Tendon of the *Extensors* of the *Tibia*, immediately below the Patella. By the Tendon of *Achilles*, we mean that broad, strong Tendon which extends the Foot, and reaches from the Calf of the Leg to the Heel: Its Name is derived from the *Grecian Hero Achilles*, who, by a Wound of this Tendon, is said to have lost his Life. By a Division of this Tendon, the natural Power of moving the Foot is lost; and unless it be carefully re-united, the Lameness will continue during Life. I am not, indeed, ignorant, that *Garengot* mentions a Surgeon of *Paris* who cured a Man of a Fracture of the *Os Calcis*, by dividing the *Tendo Achillis* with the Knife, leaving it without a Suture, and taking out the Fragment of the Bone, and the Patient afterwards had no Defect in the Limb. But I am so far from recommending the Imitation of this Method, that I rather advise against it; nor can I see any Reason why, in a Fracture of the *Os Calcis* only, the Surgeon should cut the *Tendo Achillis*; neither does it appear from this Relation, whether the Author only disapproves of the Suture of this Tendon, or intirely rejects it. I wish *Garengot*, who often enlarges on Difficulties of much less Importance, had, also, explain'd this surprizing Case, if true, so as to have made it intelligible. *Borelli* relates, that a Surgeon extirpated a large Tendon of the Ankle, (I suppose the *Tendo Achillis*) corrupted with an Ulcer; and that after the Wound was healed, the Patient could walk without any Inconvenience, being supplied with a new Tendon, or some analagous Substance. The Wounds of this Tendon may be of different Kinds: If it be only punctured, perforated, or partially cut, the Patient is seized with very dangerous Symptoms, as was observed in the other Tendons; but here the Disorder is more violent, as this Tendon is larger than the others. Probably on this Account the antient Physicians reckoned the Wounds of this Tendon, as it is the largest in the Body, mortal, or at least extremely dangerous, especially as they had heard and read that such a Wound was the Occasion of the Death of *Achilles*. The Symptoms accompanying a Tendon entirely divided, are much more mild and tolerable, and therefore, when a Puncture or partial Wound is attended with very violent Disorders, which will not yield to proper Remedies, let the Tendon be cut through, and then will the Pain and Convulsions cease; and in reuniting the Tendon by the Suture, none of these dreadful Symptoms appear. But why the accidental Puncture of a Tendon should be attended with such dangerous Consequences, and yet the Perforations made by the Needle should occasion little or no Disorder, is by no Means evident to me, though the Truth of this Fact is undoubtedly proved by Experience. For this Reason, it is not surprizing that *Paré*, who in many Cases was not so timorous, and many eminent Physicians, should be afraid to attempt this Operation: And *Veslingius*, when he had seen the Tendon of *Achilles* reunited by Suture, and that of the *Extensors* of the *Tibia* under the *Patella* performed by an *African* Surgeon, owns, that he abhorred the Rashness of such Operators, although the Success and Ease of the Cure sufficiently demonstrated the Unreasonableness of his Timidity. However, that



the *Tendo Achillis* when divided may be united, like other wounded Tendons, without a Suture; is not impossible, if the Foot can be bound up in such a Position, that the divided Extremities may be brought into Contact.

The Method of performing this Suture differs little from the Suture of the Tendons of the Hand, (see *Tab. 57. Fig. 7. and 10.*) except that the Needle should be larger and stronger, but either strait, as at *Fig. 8. Let. A*, or crooked and flat, as at *Fig. 9.* The Thread, also, is required to be stronger, as at *Fig. 8. B B.* The first Account of this Operation, so far as I know, was given us by *Veslingius*. One Instance he relates of the Suture of the Tendon of *Achilles*, and the other, which he saw in *Africa*, of that of the *Extensors* of the *Tibia*. It was afterwards performed by the eminent *Mr. Cowper*, of *London*, whose Description of this Operation, being the most particular yet published, I shall here deliver, taking Care to supply his Defects, and illustrate his Obscurities.

*Mr. Cowper's* Patient was about thirty Years of Age, having the *Tendo Achillis* of his left Leg cut through, about the Breadth of three Fingers above the *Os Calcis*, the superior Part being drawn up from the inferior about two Inches. (See *Fig. 10. A B.*) *Mr. Cowper* first open'd, by Incision, the Integuments *a b*, before he could have Access to the Extremities of the Tendon. This Incision *Garengot*, and some other Moderns, forbid, because from it they apprehend various Inconveniencies. But that no bad Consequences can arise from this Circumstance, is evident from the happy Conclusion of this very Case, not to mention the same Sort of Incision already recommended in treating the Tendons of the Hands. And if the Ends of the Tendon recede so far from one another as is here related, the Suture cannot be performed without such Incision. *Cowper* here used two strait, small Needles; but *Garengot* directs two very large, crooked Needles: But this Instance shews, that the Operation may be well executed with the small, strait Needles, though, perhaps, those which are crooked may be more convenient. We, also, learn from this Case, that the *Acutenaculum*, or Handle for the Needle, is not so extremely necessary as *Garengot* has represented it; for *Cowper* makes no Mention of it, and therefore it is probable he did not use it. He passes the first Needle *C* with a waxed Thread of Silk through the superior Part of the Tendon *A*, about half an Inch from the Extremity. By the *Figure* it appears that he entered the Needle on the Outside of the Tendon, guiding it to the Inner-side, though he makes no Mention of it; but the *Figure* does not exactly shew what Part of each End of the Tendon was perforated by the Needle *C*; that is, neither where it enter'd, nor where it came out, both of the superior and inferior Part of the Tendon. With another Needle *D*, and a like silken Thread, he in the same Manner pierced the superior Part of the Tendon, entering it a little lower than the first; then he passes both the Needles through the inferior Part of the Tendon *B*. The Foot was afterwards extended, and the Extremities of the divided Tendon were brought into Contact by drawing the Ends of the Threads together, which were tied so as to keep the Extremities of the Tendon in Conjunction, while the Foot was retain'd in this Position, and the Ends of the Threads were cut off. In what Manner the Ends of these Threads were tied, whether *C* with *D*, or *C* with *C*, and *D* with *D*, is not mentioned in the Relation, nor appears from the *Figure*. But from what is below observed, I am of Opinion, that *C* is tied with *C*, and *D* with *D*. The Wound was then dressed with Lint dipped in Balsam of Turpentine, and a Compress and Bandage was applied. Next, that the Foot might be retained in a proper Extension, and the Extremities of the Tendon exactly kept in Contact, a sort of Arch was made of the thickest and firmest Pasteboard, which was so applied to the anterior Part of the Foot and Leg, as to keep the Foot extended and immovable, and prevent a Rupture of the Suture. He observes, that the Patient complained of severe Pain, when with the Needle he perforated the superior Part of the Tendon; but felt none when he pierced the inferior Part. Then, in order to prevent various Mischiefs, fourteen Ounces of Blood were extracted from the Arm of the Patient, who was next put to Bed, and in the Evening an Ounce of the *Syrupus e Meconio* was exhibited to him, to compose him to Rest. Next Day the Patient was in a favourable Condition, slept well, and only complained, that in the Night he felt lancinating Pains in the Calf of his Leg when he happened to awake. The third Day, the Wound was dressed in the same Manner as the first, adding only a Fomentation of Wormwood, Sage, Rosemary, and Bay-Leaves. On the fourth Day, the Wound appeared very wet with a serous Humour called *Synovia*; on the 6th, this Matter was thicken'd, and on the 8th, still more inspissated, after which it disappeared. All this Time the two Extremities of the divided Tendon

had not at all receded, but between them appeared a white Substance, to which the Balsam of Turpentine and Tincture of Myrrh were applied. Soon after this white Substance cast off, and the two Extremities appeared covered with a fungous fleshy Substance. To the Wound were afterwards applied dry Dressings, sometimes dry Lint, and sometimes the Powder of Turpentine. On the tenth Day, one of the Threads appeared relaxed, which *Cowper* cut and extracted. Two or three Days after, the other Thread became loosen'd, which he also cut and extracted, the Foot being all the while kept extended with the Pasteboard Arch. Hence it appears, that the Ends of the Thread *C C* were tied together, and likewise those at *D D*, as I above hinted, because one of the Threads became relaxed, was cut, and extracted, while the other remained tight; for had they been tied in any other manner, if one of the Threads had been cut, the other would also have been loosened. In one Circumstance, *Cowper* widely differs from all others; for it does not appear by his Relation, that he used any Compresses of Leather, Cork, or of waxed Linen or Silk. He also directs how the Threads of the Suture should be extracted, a Particular which is generally overlooked by other Writers; as is the Pasteboard Arch, which however is so necessary in this Case, that the Extension of the Foot cannot easily be preserv'd without it. Nor does any other Author mention the frequent Application of corrosive Medicines, to remove or diminish the spongy or luxuriant Flesh. In thirty Days the Patient was able to walk a little, though lamely. He gradually came to walk with greater Ease, and about the End of the second Month, recovered the perfect Use of his Foot. But *Paré* gives an Instance of the Tendon of *Achilles* being cut with a Sword, which not being united by Suture, was not only tedious and difficult of Cure, but after a Cicatrix was induced, it again broke as the Patient was rising out of Bed.

*Veslingius* gives a very imperfect Account of the Sutures which he saw of this kind: *I saw*, says he, *the Tendon of Achilles, in my Father's Amanuensis, which had been divided a little above the Os Calcis, united with some Sutures performed by Surgeons. I likewise saw the Tendon of the Extensors Tibia, in an Arabian, which had been cut with a Scymetar, transversely under the Patella, brought into Conjunction in the same manner by a Surgeon of Tunis.* From this Relation we can only learn, that more than one Suture was used, but no Mention is made of the Manner of Dressing, and Method of Cure. *Kisner*, in his Dissertation *de Tendinum Læsonibus*, has delineated another Method of performing the Suture of the Tendon of *Achilles*, which I have represented in *Tab. 57. Fig. 7.* which is so plain as to need no further Explication. But though the Generality of Authors direct to make the first Perforation in the upper Part of the Tendon, he begins with the lower at *D E*, and makes the slipping Knot on the superior Part, which others make on the inferior. But though I do not deny, that this Method proposed by *Kisner* may succeed, yet I would prefer that followed by *Cowper* and others.

The Method of performing the Suture of the Tendon of the Extensors of the *Tibia*, has not, I believe, been hitherto described by any Author; but I conceive it may be done in the same manner as that just described. But as this Tendon is larger than the Tendon of *Achilles*, one Puncture in each Part of the Tendon may not be sufficient; it may therefore be proper, the Leg being first extended, to use a Thread with two Needles, and to make two Perforations in each Part of the Tendon, after the Manner proposed by *Nuck*, [See *Tab. 57. Fig. 4. Lit. E F.*] which we have already given. The Wound may be afterwards treated, as we have directed in Tendons of the Hands, or according to the Method proposed by *Cowper*. The Ham must afterwards be bound up with Splints of Wood, or thick Pasteboard, as in a Fracture of the Patella; so that the Knee cannot be bent, but retained in continual Extension. But by carefully observing to keep this Posture of the Leg, and treating the Wound in a proper manner, I make no doubt but this Tendon may coalesce without a Suture; because the superior Part of the divided Tendon will not shrink so much as in the Tendon of *Achilles*, on account of the Connexion of the Patella with the *Tibia*; and therefore the two Extremities may more easily be brought together, and retained in Contact by proper Bandages.

#### OF THE SUTURE OF THE LIGAMENTS.

As the Ligaments consist of a similar Substance with the Tendons, in all probability they may be successfully united by the same Method, though I know no Instance of this Operation. But in this Suture the Thread with two Needles seems to be most proper, and the Method recommended by *Garengot* for Sutures of the Tendons, which we have already given, should be observed. The Dressings and other Treatment



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ment may be the same as in the preceding Cases. *Heister's Surgery.*

**SYALITA.** H. M. *Arbor Indica flore maximo, cui multæ immascentur Siliquæ.* This is a tall Tree, forty or fifty Foot in Height, growing in *Malabar*, and bearing a most beautiful and sweet-scented Flower, succeeded by a very large Fruit resembling an Apple, and much like our subacid or vinous Apples both in Taste, Smell and Pulp, tho' somewhat too acid to be eaten as a Delicacy; it is, however, used by the Natives, especially in their Broths.

Of the Leaves of the Tree they prepare a Lixivium, which is of use in cleansing the Greasiness of the Hair, and detaching the Sordes of the Head, and also in smelting and depurating Silver. The expressed Juice of the Roots applied in Linen moistened therewith, resolves inflammatory and Oedematous Tumors. The expressed Juice of this tender Fruit, made into a Syrup with Sugar, cuts and expels Phlegm, and cures the Aphthæ and Inflammations of the Fauces. The mature Fruit loosens the Belly, and frequently excites a Diarrhæa. And the Bark of the Tree bruised with an Infusion of Rice, which the Natives call *Ambata-Confja*, being rubbed on the affected Part, cures the Gout. *Raii Hist. Plant. p. 1707.*

**SYCAMINOS.** The Mulberry.

**SYCE,** *συκη.* The Fig.

**SYCIA,** by Corruption for **SICYA**, which see.

**SYCION,** *συκιον.* A Decoction of dry'd Figs.

**SYCITES,** *συκίτης.* An Epithet for Wine impregnated with Figs.

**SYCOMA.** See **SYCOSIS.**

**SYCOMORUS,** Offic. J. B. I. 124. Ger. 1326. Emac. 1509. *Sycomorus sive Ficus Egyptia*, Park. Theat. 1492. *Ficus folio Mori, fructum in caudice ferens*, C. B. P. 459. *Raii Hist. 2. 1439.* THE EGYPTIAN SYCOMORE.

It grows in *Egypt* and other Countries, and the Fruit and Tear are in Use. The Fruit is cooling and moistening, and relaxes the Stomach, and cures hard Tumors; the Tear resists Poisons and the Pestilence.

The Fruit of the Sycomore agrees with the Belly, but affords very little Nutriment, and is bad for the Stomach. It is supposed to be of a refrigerating and moistening Quality, and to loosen the Belly, whence it is proper to be applied with the Oil of Roses to the Stomach in feverish Disorders. *Galen* bestows very high Commendations on the Plaster *δαδσυκομορις*, *Diasycomorum*, for the Cure of a Tumor proceeding from a gross and vaporous Spirit. The Tear of the Tree has the Virtue of mollifying, conglutinating Wounds, and discussing what is difficult to be maturated. It is also taken inwardly, and used outwardly in Inunctions against the Bites of Serpents, scirrhus Hardnesses of the Spleen, and Pains and Coldness of the Stomach. The Ancients prepared a Wine of the Fruit, which easily degenerated into a very sharp Vinegar. *Raii Hist. Plant.*

**SYCOSIS,** *σύνκωσις*, in Latin *Marisca*, is a Tumor in the Anus, differing from the Thymus only in Bigness. *Σύνκωσις*, in *Celsus*, *Lib. 6. Cap. 3.* is also an Ulcer, so called, he says, by the *Greeks*, from its Resemblance to the *σύνκωσις*, or *Ficus*, because the Flesh grows up in it. He proceeds to tell us, that it is of two Kinds, one hard and round, the other moist and unequal. From the hard Ulcer, or *Sycosis*, is discharged a glutinous Substance in small Quantities; from the humid Ulcer, a larger Quantity and of an ill Smell. They both arise in those Parts which are covered with Hair; but that which is round and callous, is generally seated in the Beard; the moist Kind, for the most part, among the Hair of the Head. Thus *Celsus*.

For the Cure of both these Kinds of *Sycosis*, the same Author advises the Application of the Elaterium, or Linseed bruised and made into a Mafs with Water, or Figs boiled in Water, or the *Emplastrum Tetrapharmacum* made up with Vinegar, or to rub the Place with *Terra Eretria* dissolved in Vinegar.

*Sycosis*, *σύνκωσις*, is also the same as *Sycoma*, *σύνκωμα*, or *Sycoti*, *σύνκωτι*, which is an Eminence and Tumor of the Eyelids with an Asperity, whence the Eyelid is called *Ficosa Palpebra*. *Paulus* gives this Name to a rough Excrecence of the inner Part of the Eyelid, which increases so as to have Incisures, by which it is distinguished from a *Trachoma*, *τράχυμα*. And the Author of the *Hygiene* defines a *Sycosis* to be something like Flesh growing in the interior Part of the Eyelid, and hanging out in such a manner as to incommode the Eye in its Motion. *Actius, Tetrab. 2. Serm. 3. Cap. 45.* tells us, that what we call a *Sycosis*, has high Eminences, and, as it were, Incisures.

*Galen, Com. 2. in 6 Epid.* for exulcerated Tumors and Eminences in the Eyelid, directs, first to use exasperating Medicines, and then Corrolives, that their Virtue may penetrate the deeper; and tells us, that in such Cases he has made

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use of the rough Skin of a Whale, the Shell of a Sepia, and a Pumice-stone. The same Author, *Lib. 11. de Simpl. Med. Fac.* says, that they call great and considerable Asperities of the Eyelids *Sycosis*; and *Lib. 4. de C. M. S. L.* that small Asperities of the Eyelids are called *Trachemata*, but considerable ones *Sycosis*.

**SYCOTA,** *συκωτα*, from *σύνκωσις*, a Fig; are a delicate Sort of Food prepared of *Carycæ*, which, as *Galen* says, *Com. 3. in Lib. de R. S. J. A.* on account of their Sweetness, are very grateful to the Viscera, particularly the Liver, but very hurtful in Fevers and internal Inflammations, because they are easily converted into Bile.

**SYCOTON,** *συκωτιον*, we are told by *Actius, Tetrab. 2. Serm. 2. Cap. 127.* is a Name for the Liver of a Pig fatten'd with *Carycæ*.

**SYDIA.** Wool. *Rulandus.*

**SYLETUM,** is defined by *Paracelsus*, a Medicine compounded of three Salts. *De Tartaro, Tract. 2. C. 5.*

**SYLO.** The whole World. *Rulandus.*

**SYMBOLISMUS.** Means a Consent of Parts, in the Writings of some of the Chymists.

**SYMBOLOGICE.** That Part of Pathology, which treats of the Signs or Symptoms of Diseases.

**SYMPARATAXIS,** *συμπαράταξις*, from *σύν*, importing Conjunction or Mixture, and *παράταξις* (of *τάταξις*, to order) to draw up an Army in Order of Battle, is properly a Conflict between two Armies, but is used by *Hippocrates, de Præfca Medicina*, to signify the Conflict or Contention between the Disease, Nature, and the Aliments.

**SYMPASMA,** *σύνπασμα*. The same as **CATAPASMA**, or **DIAPASMA**.

**SYMPATHETICUS PULVIS.** The Sympathetic Powder.

Take good *English* Vitriol, such as we call Bow Copperas, purify it by two or three Dissolutions, Filtrations, and Crystallizations; set those Crystals in a clean Pan in the Sun, either in *June*, *July*, or *August*, till they are calcined to Whiteness. When one Side is calcined, turn the other, and in a few Days the Crystals will crumble into Powder; if they do not, they may be again beat and exposed to the Sun, and stirred three or four times every Day. At last beat them into a very fine Powder, and again set them in the Sun, stirring as before for two or three Days more, in which Time they will be very white; then take in the Matter while the Sun shines hot upon it, and keep it from the Air in Glasses well stop'd, and in a dry Place.

It is a mild powerful Styptic, very successfully applied in the Stopping of Blood, either at the Nose or Wounds, and will incarnate and heal up, where the Bone is not unbound. We have a great many surprising, and even romantic Stories, of its Efficacy, by some Writers in that Way, by which it has obtained its Name, and particularly by *Sir Kenelm Digby*; but the present Practice owns no such Chimeras.

*Powder of Sympathy*, according to *Sir Kenelm Digby*, from whose Discourse on this Subject, made before a solemn Assembly of Persons of Quality and Learned Men at *Montpellier* in *France*, the following Account is taken, is a Powder which naturally, and without any Magic, cures Wounds without touching, and even without seeing the Patient.

The Method and primitive Manner how to make use of this sympathetic Remedy, was to take only some Vitriol, and that of the common Sort, as it came from the Druggists, without any Preparation or Addition at all, and to dissolve it in Fountain-water, or rather Rain-water, in such a Proportion, that putting therein some polished Iron, it should come out changed into the Colour of Copper. And into this Water they put a Clout or Rag, embued with the Blood of the Party hurt (the Rag being first dry); but if it was yet fresh, and moist with the reeking Blood, there was no Need but to powder it with the small Powder of the same Vitriol, in such sort that the Powder might incorporate itself, and imbibed the Blood remaining yet behind, and keep both the one and the other in a temperate Heat and Place, viz. the Powder in one's Pocket, and the Water (which admits not of this Commodity) in a Chamber where the Heat was temperate, and every time that one puts new Water of Vitriol, with fresh Powder and new Cloth, or other bloodied Stuff, the Patient should feel new Pains, as if the Wound had been then dressed with some sovereign Medicament; and for this Reason, they used to reiterate this Manner of Dressing both Evening and Morning.

But now the most part of those who make use of this Remedy of the Powder of Sympathy, do endeavour to have Vitriol of *Rome*, or of *Cyprus*, and calcine it white in the Sun.

[ \* X x x ]



Sun. And besides, some use to add the Gum of Tragacanth, it being easy to add unto Things already invented.

The Virtue of this Powder is confirmed, as our Author says, by one of the clearest, most perspicuous, and most avowed Instances that can be, not only from the remarkable Circumstances thereof, but also for the Hands through which the whole Business passed. For all the Circumstances were examined and founded to the Bottom by one of the greatest and most knowing Kings of his Time, King James [the First] of England, who had a particular Talent, and marvellous Sagacity, to discover natural Things; as also by his Son King Charles, and the Duke of Buckingham, their Prime Minister. And all was register'd among the Observations of the Great Chancellor Bacon, to add, by way of Appendix, to his *Natural History*. The Matter of Fact is as follows.

Mr. James Howell, well known for his publick Works, and particularly his *Dendrologics*, endeavouring to part two of his Friends engaged in a Duel, seized with his Left Hand the Hilt of the Sword of one of the Combatants, and with his Right Hand laid hold of the Blade of the other. They being transported with Fury one against the other, struggled to rid themselves of the Hindrance their Friend made, that they should not kill one another; and one of them roughly drawing the Blade of his Sword, cut to the very Bone the Nerves and Muscles of Mr. Howell's Hand; and then the other disengaging his Hilt, gave a cross Blow on his Adversary's Head, which glanced towards his Friend, who heaving up his fore Hand to save the Blow, he was wounded on the Back of his Hand, as he had been before within. The two Combatants seeing Mr. Howell's Face besmeared with Blood, by heaving up his wounded Hand, left fighting at once, and ran to embrace him, and having searched his Hurts, they bound up his Hand with one of his Garters, to close the Veins which were cut and bled abundantly. They brought him home, and sent for a Surgeon; but this being heard at Court, the King sent one of his own Surgeons; for his Majesty much affected the sad Mr. Howell.

It was my Chance to be lodged hard by him, and four or five Days after, as I was making myself ready, he came to my House, and prayed me to view his Wounds; for I understand, said he, that you have extraordinary Remedies upon such Occasions, and my Surgeons are apprehensive that it might grow to a Gangrene, and so the Hand must be cut off. In effect, his Countenance discovered that he was in much Pain, which he said was insupportable, in regard of the extreme Inflammation. I told him I would willingly serve him, but if haply he knew the Manner how I would cure him, without touching or seeing him, it may be he would not expose himself to my Manner of Curing, because he would think it perhaps either ineffectual or superstitious. He replied that the wonderful Things which many have related unto me of your Way of Curing, make me nothing at all doubt of its Efficacy. I asked him then for any thing that had the Blood upon it; so he presently sent for his Garter, wherewith his Hand was first bound; and having called for a Basin of Water, as if I would wash my Hands, I took a Handful of Powder of Vitriol, which I had in my Study, and presently dissolved it. As soon as the bloody Garter was brought me, I put it within the Basin, observing in the mean while what Mr. Howell did, who stood talking with a Gentleman in a Corner of my Chamber, not regarding at all what I was doing; but he started suddenly, as if he had found some strange Alteration in himself. I asked him what he ailed. I know not what ails me, replied he; but I find that I feel no more Pain; methinks that a pleasing Kind of Freshness, as if a wet cold Napkin did spread over my Hand, has taken away the Inflammation that tormented me before. I answered, since you feel already so good an Effect of my Medicament, I advise you to cast away all your Plaisters, only keep the Wound clean, and in a moderate Temper betwixt Heat and Cold. This was presently reported to the Duke of Buckingham, and a little after to the King, who were both very curious to know the Circumstance of the Business, which was, that after Dinner I took the Garter out of the Water, and put it to dry before a great Fire. It was scarce dry, but Mr. Howell's Servant came running, that his Master felt as much Burning as ever he had done, if not more, for the Heat was such, as if his Hand were betwixt Coals of Fire. I answered, that tho' that had happened at present, yet he should find Ease in a short time, for I knew the Reason of this Accident, and I would provide accordingly, for his Master should be free from that Inflammation, it may be, before he could possibly return unto him; but in case he found no Ease, I wished him to come presently back again; if not, he might forbear coming. Thereupon he went, and at the Instant I did put again the Garter into the Water, he found

his Master without any Pain at all. To be brief, there was no Sense of Pain afterwards; but within five or six Days the Wounds were cicatrised and entirely healed.

King James, who had received a punctual Information of what had happen'd, would fain know how it was done. I readily told him what the Author, of whom I had the Secret, said to the Great Duke of Tuscany on the like Occasion. It was a religious Carmelite, who came from the Indies and Persia to Florence; he had, also, been in China, and having done many strange Cures with his Powder, after his Arrival in Tuscany, the Duke said he would be very glad to learn it of him. The Carmelite answer'd, that it was a Secret he had learnt in the Oriental Parts, and he thought there was not any Person in Europe who knew it but himself, and that it deserved not to be divulged, which could not be done if his Highness meddled with the Practice of it, because he was not likely to do it with his own Hand, but must trust a Surgeon, or some other Servant; so that, in a short Time, divers others would come to know it as well as himself. But a few Months after I had an Opportunity to do an important Curtesy to the said Friar, which induced him to discover unto me his Secret; and the same Year he returned to Persia, so that now there is no other knows this Secret in Europe but myself. The King replied, that I need not be apprehensive that he would discover any Thing, for he would not trust any Body in the World to make Experience of his Secret, but that he would do it with his own Hands, and therefore desired some of the Powder; which I deliver'd, instructing him in all the Circumstances. Whereupon his Majesty made sundry Proofs, whence he received singular Satisfaction.

In the Interim Dr. Mayern, his first Physician, wanted to discover what was done by this Secret; and at last he came to know that the King made use of Vitriol. Afterwards he accosted me, saying, he durst not demand of me the Secret, because I made some Difficulty of discovering it to the King himself; but having learnt with what Matter it was to be done, he hoped that I would communicate unto him all the Circumstances how it is to be used. I answered him, that if he had asked me before, I would have frankly told him all, for in his Hands there was no Fear that such a Secret should be prostituted. A little after the Doctor went to France, to see some fine Lands which he had purchased near Geneva, and in this Journey went to see the Duke of Mayenne, who had been his Friend and Protector, and taught him his Secret, whereof the Duke made many Experiments, which if any other than a Prince had done, that had perhaps passed for Effects of Magic and Enchantment.

After the Duke's Death, who was killed at the Siege of Montauban, his Surgeon, who waited upon him in doing Cures, sold this Secret to divers Person of Quality, who gave him considerable Sums for it, so that he became very rich thereby. The Thing being thus fallen into many Hands, remained not long a Secret, but by Degrees came to be so divulged, that now there is scarce any Country Barber but knows it.

The Author proceeds from Matter of Fact to assign Reasons, or, as he says, to make good convincing Proofs, that this *sympathetical* Cure may be done naturally. Here, tho' indeed he manages his Argument very ingeniously, and shews a great Insight into Nature for those Times, and enlivens his Discourse with many remarkable and surprising Relations; yet what he says, I doubt, will not appear demonstrative to one whose physical Notions are built upon modern Principles and Discoveries. The Powder itself, and its Effects, how well soever they seem attested, are left intirely to the Judgment of the Reader.

SYMPLEPSIS. Concoction, or Digestion.

SYMPHONOS. συμφωνος. An Epithet for a Medicine against a Cough and Fever, recommended by Galen, *L. 7. de Comp. M. S. L. Cap. 2.*

SYMPHORANEUROS. A Term peculiar to *Forestus*, importing a severe Tremor in acute Fevers, accompanied with an Hebitation of the Senses.

SYMPHYSIS. σύμφυσις, from σύν, with, or together, and φύω, to grow, in Anatomy, is a Species of Articulation. In Surgery, *Symphysis* is a Coalescence of the natural Passages, as the *Anus*, *Vagina*, Nostrils, or any other Part.

SYMPHYTUM.

The Characters are;

The Calyx is cut, even to the Base, into five long slender Segments. The Flower is monopetalous, pendulous, cylindrical, in the lower Part, and in its upper Part, which has its Margin quinquefid, resembling a Pitcher. From the interior, lower, fistulous Part of the Flowers, where it begins to be explicated, proceed five Stamina, and as many sharp, nodding Pales, placed alternately. The Seeds are smooth, thinning, and resembling those of the *Lithospermum*.



# S Y M

*Boerhaave* mentions six Sorts of *Symphytum*, which are ;  
1. *Symphytum* ; *Consolida major* ; mas ; flore purpureo.  
*Boerb. Ind. A.* 195. *C. B. P.* 259. *Symphytum*, *Consolida major*. *Offic. Tourn. Inst.* 138. *Symphytum magnum*, *J. B.* 3. 593. *Raii Synop.* 3. 230. *Symphytus majus vulgare*, *Park. Theat.* 523. *Consolida major*, *Ger.* 660. *Emac.* 806. *Raii Hist.* 1. 505. COMFREY.

*Comfrey* has a large Root, divided into many Branches, which are black, on the Outside, but white within, full of a slimy tenacious Juice. The lower Leaves are pretty large, long, narrow, and sharp-pointed, hairy and rough. The corner'd Stalks grow to be two or three Foot high, cloathed with smaller Leaves, and bearing on their Tops reflected Spikes of white Flowers, opening by Degrees ; each Flower being hollow and cup-fashion, cut into five blunt Segments on the Top, and set in a very hairy Calyx ; in which, after the Flower is fallen, grow four rough Seeds. It grows by River Sides and watery Places, and flowers in June.

There is one Sort of great *Comfrey*, that bears purple Flowers ; but it is not so frequently met with as that with white.

The Roots, Leaves and Flowers are used.

*Comfrey* is a good vulnerary Plant, having the Name of *Consolida* given it, because it consolidates Wounds. It is likewise good against inward Bruises, Spitting of Blood, and is useful against sharp corroding Humours, that cause Erosions in the Bowels. The Roots beaten to a Cataplasm, ease Pains of the Gout.

The only officinal Preparation from *Comfrey*, is the *Syrupus de Symphyto*. *Miller's Bot. Off.*

The Leaves of *Comfrey* are insipid, glutinous, and give a very faint Tincture of red to the blue Paper ; the Roots give it a little deeper, and abound with a viscid Juice. This Plant contains a Salt very much resembling the Salt of Coral, dissolved in a very glutinous Phlegm, in which there is a little Sulphur, and a very little Sal Ammoniac : For

By the Chymical Analysis it yields several acid Liquors, a great deal of Earth, very little Sulphur, no volatile concrete Salt, but a little urinous Spirit. There is but a very small Quantity of the fix'd Salt ; so that it may probably act principally by its viscid Juice, which the Fire destroys.

*Dioscorides* says its Roots are vulnerary ; that being bruised with the Leaves of Groundsel, they alluage the Inflammation of the Piles ; that their Juice is good for spitting Blood ; and lastly, that being boiled with Meat, they join the Pieces together again. The Moderns agree that its Roots incrassate and lenify ; they are good in Hæmorrhages and spitting of Blood, caused by acrid Salts, which render it too fluid ; and, in Defluxions of the Breast, caused by saltish and corrosive Serosities. The Roots are candy'd, and Lozenges are also made of them. *Fernelius's* Syrup of *Comfrey* is very compound ; so is likewise that of *Dodonæus*, but it is more lenifying.

Take two Ounces of *Comfrey* Roots ; of Liquorice, one Ounce ; two Handfuls of the Leaves and Roots of Colts-foot ; an Ounce and an half of the Kernels of Pine-Apples ; twenty Jujubes ; two Drams of Mallow Seeds ; two Drams of the Heads of white Poppy : Boil all this in a Pound and a half of Water ; strain the Decoction thro' a Sieve ; make it into a Syrup with six Ounces of Sugar, and as much *Narbonne* Honey.

The Roots of *Comfrey* bruised and applied as a Cataplasm, very much alluage the pricking of the Tendons, the Pains of the Gout, and stop spreading Ulcers. *Simon Paulli* advises not to use them alone for the Gout, for fear they should repel the Humour. He prescribes the following Cataplasm, which he had from *Sennertus*, as an incomparable Remedy.

Take three Ounces of *Comfrey* Roots ; two Ounces of Marsh-mallow Roots ; one Ounce and a half of those of Dwarf Elder ; one Handful of the Leaves of Southern Wood ; two Handfuls of St. John's Wort ; three Handfuls of Chamomile Flowers ; four Handfuls of those of Elder ; two Ounces of Fenugreek Seed ; three Ounces of Linseed ; boil all together in Elder-Water, to make a Cataplasm. This Medicine is very compound. I mix some Drops of fetid Oil with the Root of *Comfrey* well bruised, and apply it to the Parts affected with the Gout. *Martyn's Tournesort*.

*Symphytum* is principally used in all Sorts of Fluxes, especially of the Belly, in an Erosion of the Lungs, and a Phthisis. But I, says *Bauhine*, (with whom agrees *C. Hoffman*) would not use the Root of *Comfrey* in all Kinds of Disorders of the Thorax, but only in such as proceed from a thin, subtle and hot Humour. The Flowers boiled in Red Wine, and taken twice a Day, are an excellent Remedy, according to *Comarum*, for bloody Urine. *Parkinson* commends the

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Roots cut small, then pounded and apply'd, in Pains of the Gout, and for restraining phagedenic Ulcers, and even Gangrenes. Take of the Roots of *Comfrey*, as much as you think fit, beat them in a Mortar to a Mass, which spread upon Leather, and apply to the Part affected ; this Cataplasm is not only effectual for mitigating the Pain of the Gout and Sciatica, but, also, Pains of the Arms, attended with a Privation of Motion, and for some Kinds of venereal Pains, in which it has been successful, after many Embrocations used to no Purpose. Pulverise the dry'd Root of *Comfrey*, and mix the Powder with warm Spring-Water, stirring it about till you observe the Water to become ropy with the Glue or Slime of the *Comfrey*. This very simple Medicine is prefer'd by the most skilful Surgeons, as well in Hæmorrhages, as Fractures and Luxations, before many others which are more compounded. A certain Person labour'd under a malignant Ulcer, which the Surgeons pronounced a Cancer, but could not cure it. A Mountebank was consulted ; he took the Root of the greater *Comfrey*, and scraping off the black outer Bark, he bruised the rest, and spreading it on a Linnen Cloth, applied the same twice every Day to the Part affected, and the Patient was cured ; the Cancer, however, was but recent, and of no more than eight or ten Weeks standing. *Raii Hist. Plant.*

2. *Symphytum* ; *Consolida major* ; femina ; flore albo, vel pallidè luteo. *C. B. P.* 259.

This agrees in Virtues with the former.

3. *Symphytum* ; *Consolida major* ; mas ; flore purpureo cæruleo. *C. B. P.* 259.

4. *Symphytum* ; *Consolida major* ; mas ; flore coccineo.

5. *Symphytum* ; majus ; tuberosâ radice. *C. B. P.* 259.

6. *Symphytum* ; *Echii folio angustiore* ; radice rubâ ; flore luteo. *T.* 138. *Anchusa, lutea, minor*. *C. B. P.* 255. *Boerb. Ind. Alt. Plant.*

It is called *Symphytum* from *συμφύω* (*Symphyo*) to conglutinate, to cause a Coalition, from its well known conglutinating Quality.

The first Species has a viscous and glutinous Juice, and is of excellent Service in Wounds and malignant Ulcers, attended with Hæmorrhages, in Spitting of Blood, bloody Urine, and a Phthisis. The Root is insipid, but very demulcent, and the Juice is very good in an Hæmoptoe from an excessive Tenacity, and in Hernias. The *Syrupus de Symphyto* of *Fernelius* is good in Asperities of the Lungs, but not proper for a Cough in old Persons, for it increases it. A Cataplasm of the Roots is effectual in Punctures of the Tendons. The Herb is good in a Dysentery, and an Exulceration of the Kidneys and Bladder from Cantharides ; it is exhibited like the *Althæa*, but in a smaller Dose, because of its grosser Mucosness. The Flowers bruised and boiled, with an Addition of Syrup of *Althæa*, make an excellent Cataplasm for consolidating recent Wounds. *Hist. Plant. Ascript. Boerb.*

SYMPHYTUM is also a Name for several Sorts of *Pulmonaria*.

SYMPHYTUM MINIMUM. See *BELLIS MINOR*.

It is also a Name, in *Boerhaave*, for the *Omphalodes* ; *pumila* ; *verna* ; *Symphyti folio*.

Besides the foregoing Sorts of *Symphytum*, *Dale* mentions the following Species ;

SYMPHYTUM PETRÆUM. *Offic. Symphytum petraeum foliis Thymi*. *C. B. P.* 280. *Coris cærulea maritima*, *Ejusd. Raii Hist.* 1. 882. *Tourn. Inst.* 652. *Coris cærulea Monspeliaca*, *Ger. Emac.* 544. *Coris Monspeliensis*, *Park. Theat.* 571. *Coris Monspessulana purpurea*, *J. B.* 3. 434. HEATH-PINE.

It grows in maritime Places, and flowers in May. The Herb, which is used, is drying, astringent and conglutinant ; the Plant is a Vulnerary. There are a Multitude of Plants which pass under the Name of *Symphytum Petraeum*, as *Prunella*, *Sanicula*, *Virga aurea*, *Coris Monspessulana*, *Hyssopus vulgaris*, *Polium vulgare montanum*, *Trachelia et Consolida Species aquosæ*, and some others. *Dioscorides* describes the *Symphytum Petraeum* in the following manner : " It grows on the Rocks, and has Branches like *Origanum*, but small Heads, and thin Leaves like *Thymus*. The whole Plant is " ligneous, sweet-scented, of a sweet Taste, and provokes " Spittle. The Root is long, reddish, and about the Thickness of a Finger." After thoroughly considering this Description, I cannot persuade myself, that those Authors are in the right, who, with *Thalium*, take the *Symphytum Petraeum* to be the same as the *Caryophyllus Saxatilis* ; or, with *Lebel*, to be a Species of *Prunella* ; or, with *Tabenamontanus*, the same as *Virga aurea*. *Dale*.

*Dioscorides* says, that the Root boiled in Hydromel and drank, clears the Lungs of excrementitious Particles, and given in Water cures Vomiting of Blood, and nephritic Disorders. Boiled in Wine it cures the Dysentery, and the Fluor Ruler in Women ; and taken in Oxynele, it is effectual



in Ruptures (*Echymose*) and Convulsions. Chewed in the Mouth, it allays Thirst, and cures Asperities of the Fauces. Made into a Cataplasim, it conglutinates recent Wounds, and cures an *Enterocoele*. *Dioscorides, Lib. 4. Cap. 9.*

**SYMPLESIASMOS**, συμπλησιασμός. In *Latin* expressible nearly by *Conjunctio* or *Appropinquatio*; a modest Term by which the Antients expressed the Act of Coition, or Duty of Procreation. *Castellus.*

**SYMPTOMA**, σύμπτωμα, from σύν, importing Conjunction, and πτώω, to fall or happen; a Symptom or Accident. *Symptom* is a very noted Term in Medicine; and, according to *Galen, Lib. de Dist. Sympt. Cap. 1, 2.* is taken in a large or strict Sense. In a large Acceptation, it signifies whatever preternaturally befalls a Person, whether it be a Disease, a morbid Cause, or supervening preternatural Accident. In a strict Sense, it means no more than the third or last Species; that is, the Consequences of Diseases, and of their Causes, exclusive of the Diseases and Causes themselves, and so is no other than a preternatural Affection, which follows the Disease, as the Shadow follows the Body. *Galen.*

Whatever preternatural Incident, proceeding from the Disease, as its Cause, befalls a sick Body, yet so as that it may be distinguished from the Disease itself and its proximate Cause, is called σύμπτωμα, "the Symptom" of that Disease; when it proceeds from a prior Symptom as its Cause, it is called συμπτωμα συμπτωμάτων, "a Symptom of a Symptom." But whatever happens over and above in a Disease, and owes its Rise to a different Origin from the beforementioned, is rather called ἐπιγενίμα, (*Epigenema*) ἐπιγενόμενον, (*Epiginomenon*) and συμβεβηκός, (*Symbebecos*.)

Hence it follows, that those very Symptoms first mentioned, are really Diseases in their Turn, and very different in Number, Variety, and Effects. We may, however, in Compliance with the Sentiments of the Ancients, conveniently enough reduce them, as they do, under three Heads, and make them to be either *Injuries of the natural Functions, Defaults in Retention and Excretion, or Alterations in the Qualities of the Body.* The natural Functions may be said to be injured, when they are diminished, abolished, increased beyond due Measure, or depraved; for example, the Symptoms, or Injuries of the Function which regard Appetite, are a δισφορέα (*Dysphoreia*) "a Diminution of the Appetite to Food;" an ἀνσφορέα (*Anorexia*) "an Abolition of the Appetite;" a βυλμος (*Bulmos*) "an immoderate Appetite;" and a χύσσα, μαλακία (*Cissa*, or *Malacia*) a "depraved Appetite, or a Desire after improper Food." The Default, or Disorders which fall under the Head of *Retention and Excretion*, are treated of in their proper Places, when they come to be consider'd as Causes of Diseases. And as to the third Head, a Quality of the Body is said to be alter'd or vitiated, when it is offensive to the outward Senses; and this is consider'd chiefly with respect to Colour and Smell; such, for Instance, as a fetid Scent, and a pale, yellow, green, livid, red or black Colour of the Skin. *Boerh. Institut.*

**SYMPTOSIS**, συμπτώσις, of the same Original with the preceding, is a Subsidence and Contraction of the Vessels, as it happens under Evacuations, and is oppos'd to *Dioncosis*, which see; and such a *Symptosis* appears not only in Evacuations and a ρήσις (*Rhysis*) or Flux, but, also, in a στέγνωσις (*Stegnosis*, a Constriction or Constipation) and a Suppression of the Menfes; as, on the contrary, a *Dioncosis* may proceed not only from a Suppression of the Excrements, but, also, from Fluxes and Excretions. *Symptosis* signifies, also, a sinking and Contraction of the Body and its Limbs, when oppress'd with a Lassitude and Faintness; which is an Indication, according to *Hippocrates, Lib. περι χυμών*, of the Violence and Malignity of the Disease. The Word, also, means a Sinking of the Limbs, and is joined with a *Dialysis*, a Resolution, and *Parafsis*, a Remission. *Lib. 4. Epid. T. 37.* Again, by *Symptosis*, συμπτώσις, we are to understand the Subsidence and Compression of the Vessels, express'd, 1 *Aph. 2.* by καταγνώσις, *Catagnosis*. It is applied, also, to a sinking, or falling away of the Face, Eyes, and other Parts. *Foessius.*

**SYNACTICOS**, συνακτικός, from συνάγω, to contract, endow'd with a contracting Quality. *Castellus.*

**SYNÆSTHESIS**, συναίσθησις, from σύν, and αἰσθesis, is used for the Sense which the Patient himself has of his Distemper; for Instance, of the Tension of an inflamed Part. *Galen de Al. M. Lib. 13. Cap. 1.* The Brain, also, is said to have not only an *Æsthesis*, but a *Synæsthesis*. *Castellus.*

**SYNETION**, συνᾶσις, from σύν, and αἶσις, a Cause, is the same as *CONCAUSA*, which see.

**SYNAGELASMICOS**, συναγελαστικός, from σύν and ἀγαλᾶω, to congregate, is an Epithet of such Fish as swim together in Shoals.

**SYNAGMA**, σνᾶγμα, from συνάγω, to bring together, a Concretion, Coition, Congmentation. Thus, 6 *Epid. Sect.*

3. *Aph. 11.* τὸ μὲν ἔρπον σνᾶγμα παιδοῖσι μᾶλλον, "a Concretion after making Water, is incident mostly in Children." That is, Concretion of such calcaous Matter as produces the Stone in the Bladder. *Galen* here expounds, τὸ σνᾶγμα by τῆς σύστασις καὶ πύξης, a Composition, and Concretion; and in his *Exegesis* he says, that "Synagma is either a Concretion, or an Enæorema, or an Hypostasis, or a Tophus, which last is probably the Meaning of the Word in 6 *Epid.*"

**SYNANASTOMOSIS**, συναναστόμωσις, a Connection of different Blood-Vessels.

**SYNANCHE**, σνᾶγχη. See *ANGINA*.

**SYNARTHROSIS**, σνᾶρθρωσις. See *ARTICULATIO*.

**SYNCAMPE**, σνγαμπή, from κάμπω, to bend, in *Hippocrates*, is the Joint or Flexure where the upper Part of the Arm is joined to the lower. *Castellus.*

**SYNCAUSIS**, σνγκαυσις, from σύν, and καίω, to burn; *Lat. Combustio*, in *Hippocrates de R. V. J. A.* is apply'd to a Torrefaction of the Excrements by an internal, febrile Heat.

**SYNCHONDROSIS**, σνγχονδρωσις, from χόνδρος, a Cartilage, is a Connexion of Bones by the Intervention of a Cartilage; thus the Ribs are connected to the Sternum, the Bodies of the Vertebrae to each other; as are, also, the Ossa Pubis.

**SYNCHRISMATA**, σνγχρίσματα, from χρίω, to anoint, are Ointments of the Class of *Acopa*, so called by *Paulus Aegineta, Lib. 7. Cap. 15.* *Galen*, also, *de Antid. Lib. 11. Cap. 6.* among other Antidotes, mentions some Ointments, which *Aesclepiades* called *Synchrysmata*.

**SYNCHYSIS**, σνγχυσις, from συγχύνω, to confound, a Confusion, Συγχυσις ὅλων, in 6 *Epid. Sect. 3. Aph. 1.* is a Confusion and Perturbation of all the Humours in Concoction, from the Imbecillity of the Stomach. *Synchysis*, also, in particular signifies a Disease of the Eye, consisting in a Confusion of the Humours, generally proceeding from a violent Blow, sometimes from an Inflammation of the Uvea, occasioning a Rupture of the Vessels, and an Eruption of the Humours. *Castellus.*

**SYNCIPUT**, corruptly for *SINCIPUT*.

**SYNCLEISIS**, σνγκλείσις, from σύν, and κλείω, to shut, a Conclusion, or Close, and apply'd to the Veins in the following Passage of *Hippocrates, Lib. de Morbo Sacro*, φλέβεις ἐς αὐτὴν συκλείουσι, καὶ συγκλείουσιν ἔχει, ὥστε αἰσθάνεσθαι ὅτι τις πόνος ἢ σύστασις γίνηται τῷ ἀνθρώπῳ: "The Veins have their Course towards it, [the Heart] and there conclude, or are closed up, so as that it is sensible of any Pain or Contraction happening to the Patient." But perhaps, as *Foessius* well observes, and the Construction seems best to warrant, the Meaning is that the Heart, of which he was speaking, ἔχει συγκλείσεις, "has the *Synclises*," or contains in itself Conclusions; that is, the Extremities of these Vessels by which the Humours and Spirits are convey'd to that Part, which, by that Means, is immediately sensible of any Pain or Uneasiness incident to the whole Body.

**SYNCOMISTOS**, σνγκομιστός, from σύν, implying Mixture, and κομίζω, signifying, among other Senses, to have, or contain; mixed all the Parts together. Thus (*Lib. 2. περι διαίτης*) σνγκομιστά, in Foods are those which are taken intire with all their Juices, in Opposition to ξηρά (*zera*) dry; and σνγκομιστός ἄβλος, is Bread made of the whole Corn. See *ARROS*.

**SYNCOPE**, σνγκοπή, from σύν, and κόπτω, to cut, or strike. Swooning.

If there be any Part of medicinal Knowledge which deserves, in a more than ordinary Measure, to be clearly explain'd and understood, it is certainly that which treats of the Forces of the human Body, and their Causes; since the whole Strength and Energy of Nature, which constitute the Soundness and Perfection of Life, with regard to the Mind as well as Body, by which Diseases are both prevented and cured, and by which Death itself is averted and delay'd, are observ'd to consist only in these Forces, which exert themselves in a certain, determinate, and efficacious Motion: For as a Person may be said to be of a robust Nature and firm Body, when, being in his perfect Health and Strength, he is not easily injur'd and incommoded by external Causes; or when he suffers Detriment from them, recovers, and is restor'd by meer Strength of Nature, without any considerable Assistance of Medicine; so, on the contrary, it is a Sign of Weakness of Nature, when any one, from a Decay, or languid State of those Forces, be render'd subject to various Disorders, and seldom emerges and recovers from them without the Help of the Physician. And, indeed, if we take a View of Diseases in their several Stages, we shall find, that all Hopes of Recovery appear to be founded only on the Strength of the Patient: for if this should happen to fail on a sudden, and for any considerable Time, it is



very certain that Life is in Danger. Even that Malignity, which often attends Diseases, will be found to consist, for the most Part, in this Decay of the Forces; so that from this weak State there lies an easy Passage to Death, which itself is nothing but a full Cessation of the Strength on which the vital Motions depend.

Since, then, we stand in such absolute Necessity of those Forces, that without them the Physician can do nothing, either for preserving or restoring Health, I have often wondered how it comes to pass, that among so great a Multitude of good Authors, and under such Improvements in Medicine, which every Day receives new Lights, so few have attempted to set this most useful Point in Medicine in a just Light. There are, indeed, several Opinions scatter'd up and down in the Writings of Physicians concerning the Causes of the Forces, which some, who refer all the vital and mechanic Motions of the Body, both voluntary and involuntary, to some higher Principle, consider as the Effect of the Soul; others, who deduce the Strength and motive Force of the Solids, by which the Fluids are directed, from a highly moveable Matter, of an aereo-cæthereo elastic Nature, contained in the Blood, endeavour to establish their Opinion by quite contrary Arguments. As the Subject is not yet exhausted, nor, as we imagine, well explained as it deserves by bare Authorities, and these too of opposite Sentiments, we shall crave Leave, in this present Discourse, where we shall treat of a *Syncope* and *Lipothymy*, to interpose our own Judgment, which we take to be just and right, in this Affair.

But before we enter upon a more particular Explication of this Subject, we think it proper first of all to examine what Condition of the Forces is requir'd to constitute a strong or a weak Nature. In attempting this, is to be remark'd, that though all the Functions of our Body, animal, vital, and natural, are perform'd solely by the Motion of the Solids and Fluids, we are by no Means to argue from hence, as in other corporeal Matter, or conclude from the Efficacy of the same, and the great Power of Moving, the extraordinary Firmness of the Strength, and, what depends upon it, the Soundness of the Health: For since the Structure of the human Body is, by the infinitely wise Creator contriv'd in such a Manner, that only a determinate Number and Measure of Motions are subservient to the Forces necessary for Health, it amply follows, that we are only to call that Nature robust and sound, in which we perceive no excessive nor deficient, but a moderate and equable Proportion of Motions; as, on the contrary, those Bodies are to be accounted weak which are easily excited to disorderly Motions from some slight external Cause. The Truth of this Assertion is illustrated by only considering the disorderly, and exalted even to the Degree of convulsive Agitations of the Heart, Arteries, and the rest of the Members, which, tho' they indicate an extraordinary Efficacy of Motion, can yet by no Means be taken for a salutary Measure of Strength, or such as is accommodated to the Confirmation of Health, but are rather Prognostics of an extreme Decay of the vital Forces, and oftentimes Death itself.

This premis'd; we proceed to consider the sudden Decay or Failure of the natural Forces, of which there are three principal Degrees: The first Degree consists in a remarkable Diminution of the Strength of the Body, and is known principally by these Signs, an extraordinary and unusual Lassitude of the Body, with an Inertness and Indisposition of the Limbs to voluntary Motions, a Torpor, or Numbness of the Senses, Loss of Appetite, Restlessness, Anxiety about the Præcordia, a weak and slow Pulse, with a Refrigeration and Heaviness of the Extremities. The next Gradation, on Account of its being a greater Defect or Failure of the Strength of the Body and Spirits, is called a *Lipothymy*, which begins with a Paleness of the Face, Lips, and Cheeks, and a Stupor of all the Senses, so that the Patient is quite insensible of what is done to him; a Sort of Dimness of Sight, also, seizes him, his Pulse beats very small, he falls to the Ground, and his extreme Parts are deprived of their natural Heat, and refrigerated. The third and last, as well as worst Degree, constitutes a *Syncope*, in which the Patient is deprived of all Manner of Strength, both of Body and Mind, and seems to be dead; for he falls to the Ground quite speechless, as if oppress'd with a profound Sleep, and lies immoveable, without the Appearance of Convulsions or Tremblings; the Pulse and Respiration are intercepted, the Limbs are refrigerated, and collapsed, he has the *Facies Hippocratica*, and a copious Eruption of cold Sweat about his Temples.

After a Fit of the *Lipothymy*, or *Syncope*, has spent its Force, the Patient by Degrees recovers his Senses, fetching deep Sighs, the Motion of the Heart is restor'd, and consequently the Pulse, which before was very weak or quite insensible, beats higher and brisker; the Anxieties cease; the

Heat returns into the extreme Parts; the Face, which was contracted and pale, becomes more explicated and red; all the suppress'd Functions by little and little resume their Office; and the Patient, who but the Day before was taken for dead, now seems to enjoy perfect Health; only he still complains of an extraordinary Lassitude and Imbecility of the Limbs, and of the whole Body.

Though these terrible Disorders come suddenly and unexpectedly, there are, however, some Symptoms which give Warning of their Approach: The principal of these are, a Languor of the whole Body, with an unusual Weakness, Vertigo, a Ringing in the Ears, and a sudden Change of Colour in the Face. In some the preceding Signs are Oscillations, Pandiculations, and Anxieties about the Præcordia, with an unequal Pulse, and a Sense of Horripilation, attended sometimes with a Distension and Rumbling of the Abdomen from Flatulences.

From the Premises, it will not be difficult to know how to distinguish a *Syncope* and *Lipothymy* from other Disorders, and how they may and ought to be known by Physicians. For, first of all, they differ from an Epilepsy, which indeed is preceded by some slight Kinds of Faintings, which attack the Patient before his Body is agitated with convulsive Motions and Contractions, but yet fall short of a *Lipothymy*. They differ, also, from an Apoplexy, in which Disease, though under the Abolition of both the internal as well as external Senses, there still remains a pretty strong Pulse of the Arteries, with a Respiration, though very difficult, and attended with a Stertor; which are Phenomena not observable in a simple *Lipothymy*. And they are distinguish'd, in the last Place, from an hysterical Suffocation; for in this latter you may observe, indeed, an extraordinary Perturbation of the Senses, but the Fauces are at the same Time extremely straiten'd, and under a Strangulation, as it were, by a Cord; the Arteries are agitated with violent Motions; and the Face appears of a lively red; the contrary to which Symptoms happens in *Lipothymies*, as it appears when a *Syncope*, as it often happens, joins itself with an hysterical Fit; for in that Case, there is a sudden Alteration of the foremention'd Symptoms.

As to the Subjects most obnoxious to these Affections, we are taught by Experience that such Disorders are most incident to Persons of a phlegmatic and torpid Nature; or those who, on Account of a tender Contexture of the Vessels and Fibres, are of a spongy Habit of Body, full of Blood and Juices; such, also, as being tenderly educated in Idleness, are incapable of bearing Hardships, and are easily disorder'd by any slight external Cause, as by a Temperature of the Air hotter or colder than ordinary, or by Medicines, or even by Aliments, or, what is more, by an ungrateful Smell alone. And since there have been observ'd by the best of Physicians, a surprizing Harmony and Consent between the Functions of the Body and those of the Mind, we may reckon among the Number of those who are obnoxious to such Diseases, such as are prone to sudden and violent Commotions of the Mind, as Anger, Impatience, Fear, and Variety of confus'd Imaginations. Hence we see the Reason why, in respect of Age, Children and old Persons, and of Sexes, Women more than Men, are expos'd to *Syncope*s and Fainting-Fits; and most of all, Women with Child, or when waken'd with Hæmorrhages, through an immoderate Flux of the Menfes, or Lochia, or much fatigu'd in Childbirth.

If we now proceed to examine into the Causes of these Disorders, there is no Person of competent Knowledge in Medicine, but will ascribe them to a vitious and disorderly Motion and Contexture of the Blood; for as a free and equable Influx of a sufficient Quantity of well temper'd Blood into each particular Part, and by that Means a due Distribution of the spirituous Liquid throughout the Nerves, constitutes all the Strength and Forces on which the Vigour of the Functions, whether animal or natural, intirely depend, so, on the contrary, when there is a remarkable Decay of the Strength, which manifests itself by a Diminution of all the Functions, we may very justly conclude that there is some Disorder in the arterial and nervous Fluids. We have fully demonstrat'd elsewhere that the Progress of all the Fluids through the Body, and their Influx into the several Parts and Organs, wholly depend on the Heart, which is the *Primum Movens*, and *Ultimum Moriens*, or moves and lives first, and dies last, as being the principal Machine, which with its Motions animates all the other Parts. There can be no Doubt, then, but that the Cause of a Prostration of the Body, and a Fainting, is to be deduced from a Diminution or total Suspension of the Motions of the Heart. And we are the more confirm'd in this Persuasion, by considering that the essential and characteristic Sign of a *Syncope* and *Lipothymy*, is a very small, or no Pulse,



Pulse, which is a true Indicator of the Motion of the Heart.

Since, therefore, we are oblig'd in so many Respects, if not for all Things that pass within ourselves, to the Motion of the Heart, it will be of very great Use, briefly, though accurately, to explain this Motion from its natural Causes: That the Substance of the Heart is muscular, is an Assertion not only of *Hippocrates*, who lived so many Ages ago, but of all the famous Anatomists of our Times; for if we rightly examine all the Properties which any Way belong to the Texture of a Muscle, we shall find them all in the same Manner existing in the Structure of the Heart; we may observe herein a pretty strong Tendon, which surrounds the Vessels in the Basis of the Heart, and is here, as it is in all other Muscles, the Beginning and End of Motion, and is very justly supposed to produce the *Vena Cava*, and, in an especial Manner, the Great Artery. Into this Tendon are inserted two Kinds of Fibres, dispos'd in such admirable Order, as very fitly to constitute a *Biventer* Muscle; for the exterior Fibres, which wind about the Cone in the Manner of a Screw, are inserted into the Tendon of the opposite Side; but the interior Fibres are inserted in an inverted Order. Besides these common Fibres, there are others proper to each Ventricle, of which the internal proceed in like Manner in a contrary Direction, and in the left Ventricle are more numerous and robust, for the Sake of a stronger Propulsion of the Blood over the whole Body, and to its remotest Parts; but in the right Ventricle they are fewer and more flaccid, as serving only to propel the Blood into the adjacent Lungs. The Motion of these Fibres is, also, the same with that of the Fibres of other Muscles; as is, also, their Contraction, which consists in an Abbreviation, that they may acquire as much in Breadth as they lose in Length, by which Means the Cone may always approach nearer the Base, whence a Tumor is observed not only externally, but principally in the internal Parts. Hence, when the Auricles of the Ventricles are contracted, the Sides touch one another, and so expel the contained Fluid. The Nerves, which impart Life and Vigour to all these Muscles are implanted in the Basis of the Heart, and the Roots of the Vessels, which were before observed to be Tendons of the Heart, and are Branches of the eighth and intercostal Pair; to say nothing of the coronary Veins and Arteries, which are dispers'd in great Numbers over the muscular Structure of the Heart, and greatly assist its Motion.

That the Heart moves then, we are convinc'd from its Fabric, as well as the Evidence of Sense; but there is a double Motion which belongs to it; one of Dilatation, called by the *Greeks*, *Diastole*, by which the Ventricles of the Heart are dilated, and its Fibres lengthen'd towards the Sides, to admit the Influx of the Blood from the Auricles; and the other of Constriction, or *Systole*, by which the Fibres are contracted, and the Blood, as by an hydraulic Machine, is forced into the Canals of the Arteries, and from thence into those of the Veins, and from those again into the right Auricle, by which Means Circulation is performed.

In contemplating these Subjects, there arises a Doubt of no small Moment, which is, whether the Diastole of the Heart be promoted by the plentiful Influx of the Blood distending the same. And here we are not of Opinion, that this simple and spontaneous Restitution depends only on the Blood, since it resists a strong Pressure of the Hand as much as the Systole, which we cannot imagine to be owing to the Force of the Blood, especially when we observe, that the Hearts of Fishes, after they are pulled out of their Bodies, and are empty of all Manner of Liquor, retain their Diastole, as well as Systole, for a considerable Time. It is much more probable, that the Diastole proceeds as well from the different Series of Fibres of this wonderful Muscle, as from the Influx of a very subtle, elastic Fluid, convey'd by the Nerves, and of a spirituous Blood. The Influx of a nervous Fluid into the Fibres of the Heart, is proved by that well-known Experiment of *Willis* and *Lower*, in which the Nerves in the Neck belonging to the eighth Pair being divided, and those which proceed from the intercostal Plexus, ty'd, and the Influx of the Blood into the muscular Substance of the Heart intercepted, the Heart is deprived of all Motion. So that it is very certain, that the Blood, as it is endu'd with a hot, intestine Motion, and impregnated with aereo-ethereo-elastic Particles, as well as the nervous Liquid, are greatly instrumental in promoting the Act of Dilatation. And the same will be further illustrated by this Experiment, that the Pulse of the Heart in an Animal, after it has ceased, may be restored for some Moments by Means of Heat, or fomenting the Heart with hot Water.

But though what we have advanced appears so clear and evident, as not to be question'd, there are still some so incredulous as to object against our Doctrine of the Motion

of the Heart, in which we suppose it be the *first Mover*, being of Opinion, that there is in an *Embryo*, a certain *Punctum Salientis*, which is, as it were, a Rudiment of a Heart, before the Structure of the Heart is finished. But, in my Judgment we are to have very different Notions of an Animal, while yet imperfect, and under Formation, and one actually formed, and compleat in all its Parts, and produced into the World; for which Reason it can hardly be allow'd to draw Inferences from one State to another quite different; for in this little Bubble, as in a Compendium, is included that architectonic Spirit, which is of itself sufficient to communicate Motion without the Help of many Organs, and extends its Workmanship by still framing Parts without Parts on all Sides; which Actions, in a perfect Animal, are not performed without the Help of Organs.

Having thus explain'd the Structure and natural Constitution of the Heart, and inquir'd into its genuine Use and Function, it will be easy for us to attain to the Knowledge of its preternatural State, and to give clear and distinct Definitions as well of a *Syncope* as *Lipthymy*, which, by the Consent of Physicians of all Ages, depend on a depraved Motion of the Heart. A *Syncope* is a sudden Check or Stop put to the Motion of the Heart, attended with a vast Loss of Strength and Suspension of the Functions both of Body and Mind, proceeding from a vital Obstruction, or great Impediment of the Influx of a spirituous Liquid by the Nerves, and of a well-temper'd Blood through the coronary Vessels into the muscular Substance of the Heart. Nor does the Definition of that other Species of a Privation of Sense, call'd *Lipthymy*, require much Alteration from the former, as differing only in Degree from a *Syncope*, and consisting not in a total Suspension of the Motion of the Heart, but in a very weak and low Degree of the same.

These Things being premised, let us now proceed to inquire into the remote Causes which contribute towards the Production of these severe and formidable Disorders. And since the proximate Causes either of a total Interruption, or great Deficiency of the Motion of the Heart, consists in a suspended, or sparing and irregular Influx of a nervous Fluid, and laudable Blood, as sufficiently appears from what has been said, it follows, that these are the two main Points which deserve our Consideration. For, first, it is certain from general Experience, that Persons labouring under a Weakness of the Head and nervous System, and are frequently afflicted with pressive Pains, Vertigo, and Ringing in the Ears, cold Rheum, Stuffings of the Head, Dimness of Sight, and troublesome Sleep, are very subject not only to extreme Lowness of Spirits, and Loss of Strength, but, also, to Faintings and Swoonings.

But nothing in the whole Series of Causes will sooner, or in a more violent Degree induce the Distempers treated of, than vehement Perturbations of the Mind, particularly panic Terrors, Fear, and Sorrow. For tho' the vital and mechanic Motions, of which Nature are those of the Heart and Arteries, and other Canals appointed for the Secretion and Excretion of the Humours, as well as those of the Stomach and Intestines, do not directly and immediately depend on that thinking and intelligent Principle within us, which we call the *Soul*, whose Office it is rather to direct and regulate, after a Manner unknown to us, those Motions which are voluntary; yet we are convinced by the closest Observation and Experience, that from the admirable and intimate Harmony which subsists between the voluntary and involuntary Functions, that the Affections or Passions of the Mind have a surprising Force and Efficacy in disturbing and interrupting the vital Motions in our Bodies. Hence if we curiously examine the Manner of Action of a Terror, or Fright, which among all the Passions is the most destructive of the Oeconomy of the vital Motions, we shall find it to be of such a Nature, that by causing a Constriction of the external Parts, it procures an excessive Congestion of the Blood at the Heart and Vessels connected with it, the plain Consequences of which are Coldness of the extreme Parts, a prodigious Languor and Numbness of the Limbs, Anxieties of the Precordia, Palpitation of the Heart, with a great Difficulty of Breathing, and a small and low Pulse; all which Symptoms are more certainly consequent if there be an immoderate Redundance of the Blood. Nor are the Effects of Fear, or Dread, on the Apprehension of some imminent Danger, less surprizing, since, by diminishing the Influx of the nervous Liquid into the several Organs of Motion, they greatly retard the equable Progress of the Blood, and disturb the due Circulation and Distribution of its most spirituous Part, so that it is no Wonder if the Consequences are a vast Loss of Strength and sudden Failure of the vital and animal Forces; which is the more formidable in weak Subjects, or such as are already debilitated by a Disease, or some other Cause.

There



There are also many Circumstances belonging to what we call the *Non-Naturals*, which are assistant in promoting these Disorders. Among those, what deserves our first Notice is a bad Regimen of Diet; for as Aliments abounding with good Juices, when taken in proper Quantities, are disposed for the Generation of good and lymphatic Blood, which is the Support of the Strength; so, on the contrary, Foods, which are crude, and afford but small Nourishment, if subsisted upon for a considerable Time, by mere Want of Nutriment, highly contribute to Faintings and Lipothymies. And not only Diet, but the Temperature of the Air, is also a procatactic Cause of these Disorders; for if the Air be too cold and humid, or too hot and sultry, and impregnated with Multitudes of impure Exhalations, it becomes very detrimental to the Strength and Vigor of the Body. With these Causes may be ranked immoderate Watchings and Labour, which, by keeping the Solids and Fluids in continual Action, cause a Dissipation of the spirituous and subtile Parts, by which means the Mass of Blood is altered from its due Temperature, and all our Functions, as we find, by daily Experience, begin to languish.

A *Lipothymy* is also frequently occasioned by a sphacelous Corruption, either internal or external, and of all things the most prejudicial to the Oeconomy of the vital Motions. The Truth of this Position will appear not only from the Consideration of malignant and contagious Diseases, as the Petechiæ, Dysentery, and pestilential Fevers, but of chronical Diseases, particularly the Scurvy, Cachexy and Dropsy, where, as the Corruption and Putrefaction increase, all the Forces of Nature, together with the Motions of the Heart, languish and decay. Not unlike are the Effects of Opiates and Narcotics imprudently exhibited, whose Way of Operation consists principally in mixing their sulphureous and noxious Effluvia with the Substance of the Fluids, and so contaminating those highly moveable Parts, as to render them incapable of performing their Functions according to the Laws of Nature. Besides the forementioned Causes, there is one, which is somewhat surprising; I mean, fragrant and sweet Smells. These, tho' otherwise very grateful to Nature, are yet found to be offensive and prejudicial to Women subject to Hysterics, or those whose Bodies are weakened by any other Disease to such a Degree, that all the Symptoms are exasperated by them, and the Patient falls down in a Syncope, and lies for dead. The Reason of so remarkable an Effect, as we imagine, consists in that such strong odoriferous Substances, by their vaporous Quality, suppress more and more the elastic Force of the nervous Fluid, which was before much diminished by the Violence of the preceding Distemper, in the same manner as Preparations of Castor have sometimes good, sometimes bad Effects, according to the vastly different Constitution of the nervous Juice and Fibres.

Among other Causes of these Disorders, we are not to omit Poisons with Cathartics and Emetics of a violent and caustic Quality, which, by exciting strong Spasms in the universal System of the nervous Parts, with Crispations and Contortions in the highly sensible Tube of the Intestines, intercept the equable Influx of the Blood and highly subtile Fluid into the several Parts, and thus occasion a violent and sometimes mortal Syncope. From the same immediate Cause it happens, that we may observe that a violent *Lipothymy*, and such as falls little short of a *Syncope*, usually succeeds such Diseases as were attended with very sharp Pains; and the same has been often known to proceed from a violent Fit of Anger; whence the ancient Physicians used to call this Species of *Syncope* by the particular Name of *Cardia*. For tho' it be the Nature of this Disorder to exert its destructive Force principally upon the biliary Ducts, it cannot be avoided, but that, on account of that remarkable Consent of Parts, which subsist between these Parts and the Stomach, Lungs and Heart, by means of the eight Pair of Nerves, and the common Par Vagus, all these sensible Parts will at the same time be fellow-sufferers, and labour under severe Spasms.

A *Lipothymy* is no less incident to Persons whose Strength has been much exhausted by immoderate Hemorrhages, or any other excessive Excretions. On this Occasion I cannot but observe, that I have several times known Persons who have indulged themselves in the immoderate Use of venereal Pleasures, contract by Degrees *Lipothymies*, and even *Synscopes*. And nothing is more frequent than, after copious Evacuations by Sweat and Stool, Phlebotomy unseasonably administered, Blood lost by Wounds, or any other excessive Profusions of the same, for the Patient to fall into Fainting-Fits, especially if proper Preservatives be not at hand. And the Reason is obvious; for since by such Accidents not only the more subtile Part of the Blood, which is the Foundation of the Strength, is exhausted, but the Quantity itself of the Fluids is diminished, it is no wonder if the Dilatation of the Heart and its Vessels, which ought to keep pace alternately

with the Systole, is by the same means prevented, and consequently, the Motion of the Heart itself suspended, in which consists the very Nature of a *Lipothymy*; which Disorder is, in such Cases, more frequent and incident to Persons of a tender Constitution, or who have long continued in an erect Posture, by which the Course of the Blood to the Head is much more obstructed than in other Situations.

Again, the Motion of the Heart may be weakened, and a vast Loss of Strength occasioned, by an excessive Repletion, owing to a thick and viscid Blood, which being incapable of making its Progress through the narrow Channels of the coronary Vessels, is there congested, and so diminishes the Systole of the Heart and its Vessels. And nothing more disposes to mortal *Synscopes* than a polypous Concretion of Humours adhering to the Cavities of the Heart, and the contiguous Vessel, as is confirmed by Multitudes of Instances. For Concretions in those Places, by their Bulk intercepting the Circulation of the Blood through the whole Body, must at last of necessity, if not removed, destroy all vital Motion.

Having thus assigned the Causes of these Disorders, we proceed to the Prognosis, and to examine the Signs from which we may be enabled to predict a good or bad Event to them. And here I would have it most carefully observed, that the Danger in such Cases is to be estimated with regard to the Diversity of the Nature, and Causes. Thus we are told by *Hippocrates*, 2 *Aph.* 41, "that they who often fall into violent Faintings without a manifest Cause, die suddenly." For in this Case, there generally is a polypous Coagulum firmly impacted in the Vessels of the Heart and Lungs, which discovers itself upon Dissection. A *Syncope*, also, is generally observed to be mortal, when it happens after a difficult Childbirth, in which the Patient has been extremely fatigued by the Unskillfulness of the Midwife, in exciting her to unseasonable Efforts for Delivery, and has suffered an immoderate Profusion of Blood from the *Uterus*. The Patient, in a *Syncope* thus contracted, lies in a copious and cold Sweat, with a Refrigeration of the extreme Parts, the Breath expired is cold, the Countenance pale, and she can by no Remedies be recalled to Life. Nor is that Species of *Syncope*, which seizes the Patient under Hysterics void of Danger; and we have often known Women, in such Cases, taken for dead, and committed to Burial.

An extraordinary Loss of Strength in malignant Distempers, as in high Fevers, and a Proneness in the very Beginning to Faintings, especially in an erect Posture, is a most certain Sign that Life is in danger. Nor is it of good Prognostication to be dejected in Mind, contrary to Custom, utterly to despond, and to give over all Hopes of Life, tho' the Spirits, in other respects, are calm and composed; especially if these Symptoms, in an acute Fever, are attended with a Delirium and a languid Respiration, with a remarkable Smallness, or tremulous Palpitation of the Pulse. In the confluent Small-Pox, also, if the Patient, as it frequently happens, through the intolerable Pain and Heat at the Time of Suppuration, be seized with a *Lipothymy*, and particularly in an erect Posture, he is in imminent Danger of Death; for soon after succeed Refrigerations of the whole Body, a Constriction of the Skin, a Disappearance of the Pustules, and then mortal Convulsions. A *Syncope* seizing a Person already weakened by other Causes, on occasion of a vehement Fit of Anger, or the Exhibition of a strong Cathartic or Emetic, becomes mortal, unless proper Remedies be instantly administered. The same Disorder in Children, excited by Worms lacerating the nervous Coats of the Stomach, is generally mortal; and we have seen the dead Worms crawling out of the Mouth a little before the Death of the Patient.

A *Lipothymy*, or *Syncope*, attendant on hysteric and hypochondriac Cases, occasioned by a Regurgitation of the Blood to the Heart and Lungs, through an extraordinary Distension of the Stomach by Flatulences, leaves room for a Cure. And a sudden Fit of Fainting or Swooning, proceeding from some external Cause, as the immoderate Heat of a Stove or Bagnio, or Venesection too freely administered, and especially when Women or Children are the Subjects, is not so much to be dreaded. In general, it is to be observed, that the slighter the Cause of such Disorders is, the less is the Danger from them.

The Cure principally consists in answering the two following Indications: The first of these requires, that in the very Paroxysm the Motion of the Heart, which is the Fountain of all the vital Heat and Forces, may, by proper and effectual Remedies, with all possible Speed be restored.

The other directs us to make use of the first Opportunity, when the Paroxysm is past, to provide ourselves with proper Medicines for removing the Causes, and so preventing the Return of so dangerous a Disorder.



In order to answer the first Indication, let the Patient, at the Time of the Fit, be kept in a convenient Posture, not too much inclining nor erect, and in a serene, temperate, and spacious Place; and in order to provoke and recall the Influx of the Spirits, it will be proper to irritate and animate the sensible Parts with external Remedies, which are of a penetrating Quality. For this End, let there be a Superfusion of cold Water over the whole Face, let the Lips be rubbed with common Salt, and apply to the Nostrils strong Vinegar, with Balsam of Life, or English volatile Salt, which is nothing but the volatile Salt of Sal Ammoniac, impregnated with the cephalic Oils of Rue, Mint, and Lavender. It may, also, be of service to rub the Eyelids with a few Drops of some spirituous Water, particularly the Balsam of Life, and to use strong Frictions of the whole Region of the Breast, and the extreme Parts with hot Cloths, impregnated with some corroborative Water.

When the Patient, by the Use of these Remedies, begins to come to himself, it will be proper to administer some internal Medicines, in order to revive the Strength. For this purpose Wine is of excellent Service, and especially old *Rhenish*, which far exceeds all other Wines. Much Good, also, may be expected from the Use of spirituous and aromatic Waters, particularly those of Cinnamon, Lillies of the Valley, Roses, Baum, and Orange and Lemon-Peel, prepared with or without Wine.

A Physician, who intends a perfect Cure of these Disorders, and to prevent all Relapses, must first acquire a competent Knowledge of the Causes, and accommodate his Remedies to them. Thus, if a *Syncope* owes its Rise to severe Pains, or a violent Fit of Anger, in this Case mild Anodynes afford present Relief, and the more effectually, if mix'd with analeptic Waters, not too spirituous, but endued also with somewhat of an anodyne Virtue. A sovereign Remedy of this Nature is the mineral anodyne Liquor, impregnated with some Drops of Oil of Mace, or mixed with double the Quantity of Essence of Castor. Accommodated to the same Purpose, are *Sydenham's* Laudanum, and analeptic Powders, such as the *Pulvis Marchionis*, mixed with one or two Grains of Castor or *Theriaca Caelestis*, which I have found by Experience to be very safe Remedies. If a Cardiac *Syncope* proceed from an acido-bilious Humor settled in the *Primæ Viæ*, and corroding the nervous Parts, as it frequently happens in hypochondriac Cases, there will be occasion for absorbent Powders, such as those prepared of Shells, Mother of Pearl, Coral, Crabs-Eyes, fossil Unicorn, and Mountain Crystal, with an Addition of a few Drops of the Oil of Cedar; and, if the preternatural Heat require it, of some purified Grains of Nitre for each Dose. In an hysterical and hypochondriac *Syncope*, Clysters, and Medicines compounded of Galbanum, Castor, Asa foetida, Sagapenum and Myrrh, prudently administer'd, are all the Remedies necessary for a perfect Cure.

If a *Lipothymy* seizes the Patient under immoderate Evacuations from too potent Cathartics or Emetics, in this Case, besides Theriacals, Anodynes, and Analeptics, warm Milk, or Barley-water with Almonds, the Yolk of an Egg, and Saffron, taken in a sufficient Quantity, are of surprising Efficacy by their demulcent Virtue. And when there is reason to be apprehensive of more than ordinary Danger from a caustic Poison, the same Remedies are the most likely to afford Relief, especially if mixed with a good Quantity of expressed Oil of Almonds or Olives. In malignant Distempers, where a *Lipothymy*, and the like Symptoms, are the Effects of an occult Putrefaction, Mixtures endued with an analeptic and bezoardic Quality are most proper. Such are those compounded of the Waters of Carduus Benedictus, Scordium, Cinnamon without Wine, Roses, and common Baum; the *Mistura Simplex*, Wine-Vinegar, and Syrup of Citron-Juice, with which may be mixed a due Proportion of the bezoardic Powder of *Sennertus*. If the Strength be exhausted by an excessive Profusion of Blood, then, besides the Use of the more temperate Analeptics, the Patient is to be comforted and refreshed with nourishing Food, which is accommodated to the supplying and restoring of the lost Juices. Such Meats as are most recommended for this purpose, are Jelly-Broths made with Veal, Beef, or an old Cock, prepared by Decoction with Shavings of Hartshorn, Slices of Lemons, a little Mace, and a small Quantity of Wine, in a covered Pot. Chocolate is also of good Service in such Cases; and, to mention no more, old and generous Wine, sparingly exhibited, will of itself contribute more than all other Remedies towards the Restoration of the Patient.

It is certainly of the greatest Importance towards a safe Management and Conduct in the Cases before us, justly to distinguish between a gravative or oppressive Affluence, proceeding from a Fulness and Expansion of the

Humours, and a defective Weakness, occasioned by a Want of good Blood and nervous Juice; these two Circumstances are widely different with respect to their Causes, and require as different Remedies. Phlebotomy, for instance, which in the Case of a Repletion, which was first supposed, is most salutary; in the latter Circumstance, where the Blood is deficient, and therefore wants to be restored, it cannot but be highly pernicious. A just Distinction, also, is to be made between a Weakness and Loss of Strength, which owes its Origin to some Passion of the Mind, as long Sorrow, or long concealed Anger, which commonly goes by the Name of *Chagrin*, and what proceeds from some material Cause. To the first Case, moral Remedies, with every thing that contributes to render the Mind easy and chearful, are best accommodated.

As to Venesection, in particular, by way of Caution, we ought to know that when the Motion of the Heart is suppressed by an excessive Congestion of Blood, which is very often occasioned by violent Spasms of the Intestines, and there is a Turgescence of Humors in the Vessels of the superior Parts, tho' a Discharge this Way is by all means proper to be made, yet Phlebotomy is never to be administered during the Time of the Fit; for the Languor would be increased, and the Disease protracted by so doing. It is no less fruitless, as well as dangerous, under a *Lipothymy*, to pour into the Mouth spirituous Liquors, because they easily fall into the *Aspera Arteria*, and endanger Suffocation.

If a *Lipothymy* proceeds from a Suppression and Diminution of the Menses, we are not, but with the greatest Caution, to administer Emmenagogues, especially such as are qualified to raise impetuous Commotions, as Baths impregnated with Salt or Saffron, and other Things of that kind; for by causing a greater Rarefaction of the Humors, they increase the Disease.

A Loss of Strength from severe Distempers, when the Patient is naturally weak and infirm, generally portends a bad Event; and therefore we cannot be too speedy with our Assistance, which the sooner it comes the more seasonable it proves, according to that elegant old Proverb;

*Principiis obsta, sero Medicina paratur.*

“ Prevent the Mischief, Physic comes too late.”

Much more Reason have we in such acute Disorders, and especially at their Height, to avoid the Use of such Medicines as by stimulating and provoking to Stool, or other Excretions, may any way disturb or irritate Nature. For by such means the Strength, which is necessary for subduing the Disease, is still more exhausted; and if this be consumed and reduced to nothing, all the Art and Skill of the Physician are vain and insignificant. I am, therefore, mightily pleased with that Golden Rule of *Fernelius*, *Lib. 11. Cap. 10.* which it were to be wished were universally observed: “ While the Strength,” he says, continues firm, and on a good Foundation, we “ may boldly evacuate as much as the Disease requires; but “ if the Strength be quite gone, or much diminished, nothing is to be attempted of that Nature.”

The Principal of those boasted Remedies which have for so many Ages been extolled even to Superstition as the highest Cordials, and specific Analeptics in all *Synopes* and Faintings, as Pearls, Oriental Bezoar Stones, Bone of a Stag's Heart, the fine precious Stones, and others, are so far from exceeding in Virtue some other fix'd Diaphoretics and Absorbents, that they are rather to be esteemed much inferior to them. The same Judgment is to be passed on Medicines prepared of Gold; for the cordial and analeptic Quality ascribed to that Metal, is, in our Opinion, a mere Chimera, and a very remarkable Instance of the fond Credulity of the common Herd of Physicians and Patients; not to mention how incredible a Thing it is, that Gold should be reduced to mild Essences, and Quintessences by any Arts of Chymistry.

Wine, especially old *Rhenish*, which, on account of its spirituous Acid, is far preferable to other Wines, besides its internal Use before prescribed, being applied to the Nostrils, and the Region of the Præcordia, gives present Relief under a *Syncope*. Those Faintings, also, which are incident to tender and sensible Subjects, under the Administration of Phlebotomy, are prevented by taking a moderate Draught of Wine before the Operation.

There is even in simple cold Water seasonably exhibited a highly analeptic Virtue, especially when the Fainting, or *Lipothymy*, is occasioned by an immoderate internal or external Heat, and Rarefaction of the Blood. Of this *Celsus*, so long ago, was very sensible; and therefore, *Lib. 4. Cap. 5.* very strongly recommends cold Water for correcting the Disorders of the Stomach. And *Pliny the Younger*, who had by Nature a weak Stomach, and was much subject to inward Estu-

ations,



ations, assures us, *Lib. 6. Epist. 17.* that he had often received great Benefit from cold Water. *Frederic Hoffman.*

**SYNCRIMATA.** συγκρίματα, from συγκρίνω, to collect together, a Word used by *Galen, de S. F. Lib. 5. Cap. 25.* to signify the Mixtures and Concretions of simple Bodies, and the Confusion of Elements. He applies the same Word, *Lib. de diff. Morb. Cap. 5.* to the Bodies of Animals, as consisting of a Mixture of Atoms.

**SYNCRISIS.** σύγκρισις, a Concretion, Conformation, from συγκρίνωμαι, which Verb is used by *Hippocrates, 6 Epid. Sect. 2. Aph. 35.* to express the Coalition or Conformation of the Male; and by *Galen, M. M. Lib. 4. Cap. 4.* where it is opposed to διακρίσις, “to be dissolved.” *Syncrisis*, with the Chymists, is a Concretion or Coagulation, effected by a spontaneous or violent Reduction of a liquid Substance to a solid one, by a Privation of the Humid. *Castellus.*

**SYNCRITICA.** συγκρίτικα, *Syncritics*, a Name given by the Methodics to such Medicines as were of a coercive or astringent Nature (not to Relaxants, as *Blancard* will have it) *Galen de Anat. Adm. Lib. 3. Cap. 2.* The same Author, *de M. M. Lib. 1. Cap. 2.* observes, that *Theffalus* wrote a whole Volume on *Syncritics*. See the preceding Word.

**SYNCYRIA.** συγκυρία, from σύν, and κυρῶ, to be, is a Chance, or casual Event; and the same as συγκύρημα (*Syncyrima*) *Hippocrates de Præf. Med. et Lib. de Hum.*

**SYNDESIS.** σύνδεσις, from σύν, and δέω, to bind, a Binding or Straitening. Thus, *6 Epid. Sect. 3. Aph. 1.* ἡ δέμας ἀραιότης ἢ κοιλίας πυκνότης, ἢ δέμας σύνδεσις ἢ σαρκῶν ἀύξησις, “the Rareness of the Skin causes a Constipation of the Belly; but “a Straitness (Astriction of the Pores) of the Skin causes an “Increase of the Flesh.”

**SYNDESMO-PHARYNGÆUS** (*Musculus*) a Muscle of the Pharynx. See **PHARYNX**.

**SYNDESMOS.** σύνδεσμος, from σύν, and δέω, to bind, a Ligament. See **LIGAMENTUM**.

**SYNDESMOSIS.** σύνδεσμος, a Sort of Connexion of the Bones, otherwise called **SYNNEUROSIS**, which see.

**SYNDIACRISIS.** A Name given to that Chymical Operation used in preparing of the diaphoretic Precipitate from the Cinnabar of *Hartman*, by a Separation of the Principles of the Cinnabar, and a new Composition. *Castellus.* See *Schneider, L. 3. C. 16.*

**SYNDROME.** συνδρομή, from σύν, and δρέμω, to run, *Lat. Concurfus*, a Concourse. This is a Word introduced into Medicine by the Sect of the Empirics, who mean by it a Concourse of Symptoms. Thus under a Plethora, an Empiric judges Venesection necessary from a *Syndrome* of Symptoms, such as a Distention of the Vessels; a Redness and Gravity of the whole Body; an Indisposition to Motion; Tensions of the Limbs; and a Sense of an ulcerous Lassitude; besides a Life spent in Idleness, high and full Feeding, and a Suppression of wonted Excretions. This is the *plethoric Syndrome* of an Empiric; and after the same manner he forms a *Syndrome*, or Concourse of Symptoms, in a Peripneumony, Quinsy, Epilepsy, and other Diseases. *Galen* ridicules these *Syndromes*, because, he says, they happen very rarely, and also very slowly; so that should a Physician wait for a *Syndrome* of all the Symptoms he expects, he might administer his Remedies too late. *Galen, Com. 2. in 1 Prorrh. et Com. 2. in R. V. J. A. et Lib. 6. de M. M. Cap. 4.* and in other Places.

**SYNDYASMOS.** συνδυασμός, from σύν, and δύω, two, is a Word used by *Hippocrates, Lib. 2. de Morb. Mul.* to express the Commerce between the Sexes.

**SYNECHES.** συνεχής, from συνεχω, to connect, hold together, continual, is an Epithet of a Sort of Fever. See **SYNOCHOS**.

**SYNECTICON.** συνεκτικόν, from the same Original as the preceding, continet, an Epithet applied to the proximate Cause of a Disease usually called *Causa continens*, also *conjuncta*, and *contentiva*; and always remains closely united with the Disease. *Castellus.* See **CAUSA**.

**SYNEDREUONTA.** συνεδρεύοντα, from σύν, and ἰδρα, a Seat, *Lat. Affidentia*, assisting, attending, an Epithet bestowed on such Signs or Symptoms as accompany a Disease. See **ASSIDENS**.

**SYNEILEMMENOS.** συνειλημένος, straiten'd, one who is cative or bound in his Belly. *Castellus.*

**SYNENDEICNYMENA.** συνενδεικνύμενα, from σύν, and δεικνύμι, to shew or indicate, co-indicating, are Signs so called, which conspire with those that are proper to a Disease; for instance, the Age and Strength of the Patient, the Country, Season, Custom, and the like. *Galen, Lib. 13. de M. M. Cap. 16.*

**SYNENOMENA.** συνενόμενα, from σύν, and νέω, to unite, become one, are expounded in *Galen's Exegesis* by συνία (*Syniota*) co-exilling; but there is a Variation in the Copies,

and many of them have it σύννομα (*Synnoma*) conversant together, or feeding together. *Fasius.*

**SYNEREPHES.** συνερεφής, in *Galen's Exegesis*, is expounded by επικαλυμμένος, συσκιασμένος, envelop'd, covered, shady, opaque.

**SYNERGASMA.** συνεργασμα, from σύν, and ἔργωμαι, to work, operate, Co-operation. *Libanius* divides the *Synergasmata Chymica*, or chymical Co-operations into ενεργητικά, energetic, or such as are endued with an efficacious Virtue; and σκευαστικά, preparatory.

**SYNERXIS.** σύνεξις, from σύν, and ἔργω, to restrain, confine, is explained in *Galen's Exegesis* by σύγκλησις, **SYNCLEISIS**, which see.

**SYNESTECOS.** συνιστάς, ξυστηνός, from σύν, and ἵστημι, to stand; consistent, is applied by *Hippocrates*, in *Prognost. 1 Prorrh. et Coac.* to the Faeces, when firm, coherent, and figur'd, in Opposition to diffluent, liquid, humid, and aqueous.

**SYNIDROSIS.** συνιδρωσις, from σύν, and ἰδρῶσι, Sweating; is a Sweat in Conjunction with some other Affection, for Instance with a Factor of the *Alex.* *Castellus* from *Nexus*.

**SYNISTAMENOS.** συνισταμένος, consistent, the same with **SYNESTECOS**, which see.

**SYNIZESIS.** συνίησις, from σύν, and ἵζωμαι, to sit, *Lat. Confidentia*, is the same as **APOCATASTASIS**, which see.

**SYNNEUROSIS.** συννέωσις, from συν, and νέω, a Nerve, is a Species of Articulation of the Bones by the Intervention of Ligaments. *Cotuper.*

**SYNNOMA.** συννομα, from σύν, and νέμω, to feed. See **SYNENOMENA**.

**SYNOCHA.** the same with **SYNECHES**, or *Febris continua*. *Blancard.* See the following Word.

**SYNOCHOS.** σύνοχος, *Lat. Febris Continens*.

*Συνεχίς πυρετός* (*Syneches Pyretos*) continual Fevers, in *Hippocrates*, are such as continually molest the Patient without Remission, as we often find in the *Epidemics*, to which he sometimes adds τὸ μὲν ὅλον ἢ διαλείποντες, “Upon the whole not “intermitting,” That he might more clearly distinguish between them and intermittent Fevers. And this he does in express Words, *1 Epid. Sect. 3.* where he says, πυρετοὶ, οἱ μὲν συνεχεῖς, οἱ δὲ ἡμέτερον ἔχουσιν, ὡς καὶ διαλείποντες, ὡς καὶ ἔχουσιν, ἡμέτερον διαλείποντες. “There were Fevers, some continual; others “left the Patient by Day, and intermitted by Night; and “others again were urgent in the Night, and intermittent “in the Day.” On this Place *Galen* thus comments: καὶ τὸ τὸ συνεχὲς ὄνομα, καὶ τὸ τὸ διαλείποντος ὡς παλαιὸν διτλῶς φανερῶναι χρώμενοι, &c. “The Ancients seem to have used the Words “*Syneches* (continual) and *Dialipon* (intermittent) in a double “Sense. Sometimes they gave the Name of *Syneches* to all “those Fevers which never came to an Apyrexia [perfect “Cessation]; and at other times they bestow not that Appellation on all which never come to an Apyrexia, but on “those especially which undergo no Mutation till a Crisis. “Thus, also, sometimes they apply the Epithet of *intermittent* to those Fevers which have a perfect Cessation, at “other times to those which have no such total Cessation, “but undergo considerable Mutations, in the different Parts “of the Paroxysms, as in the Beginning, Increase, Height, “and Remission of the same. But some of the more modern Physicians call those Fevers which undergo no remarkable Alteration, not by the Name of *Syneches*, but “*Synochus*; bestowing the former Appellation only on those “which never come to an Apyrexia, or perfect Cessation, “but intermit after each Paroxysm, which Kind the Ancients sometimes call *Syneches* (continual), sometimes *Dialipon* (intermittent). And these are really a middle Sort “between the *Syneches*, and those which have a perfect Cessation, or Apyrexia; when compared, therefore, with the “*Synochus*, they may very well be called *intermittent*, but in “comparison of those which have a total Cessation, they “deserve the Name of *Syneches*.” The same Author, *de Crif. Lib. 2. Cap. 2.* gives the Name of *Syneches* to a Fever, “which, as he says, never comes to an Apyrexia before a “total Solution, tho’ it has a sensible Remission.”

From the Premises it appears very plainly, that *Hippocrates* and the Ancients comprehended the *Synochos* under the *Syneches*.

A Fever consisting of one Paroxysm from the Beginning to the End, and lengthened out for many Days, is by some called a *Synochus*, not indeed by a proper Greek Word, but they rather chose to commit a Solecism in Terms, than want a Name for their Idea. But the Nature of these Fevers is by no means so simple as the Idea they have formed of them, from whence they give them the Name of *Synochus*; for some of them are attended with a manifest Putrefaction; others are wholly free from it; as, for Instance, the *Diary Fever*. *Galen, Meth. Med. Lib. 4. Cap. 2.*

[ \* Z. z. ]

The



# SYN

The Fever, which some of the *Greeks* call *Synochus*, σύν-  
χος, and the *Latins* *Febris continens*, “a continent Fever,” is  
either attended with a Putrefaction or not; the latter is call-  
ed *Febris continens non putrida*, “the continent and not pu-  
trid Fever,” and has the same Signs as a putrid *Synochus*, but  
somewhat less evident. These are a Pain or Heaviness of the  
Head, with an immoderate Heat and Redness of the whole  
Body, and especially of the Face, accompanied with a pro-  
found Sleep; a great Pulsation of the temporal Arteries; a  
great, full, frequent and swift Pulse, with a Sluggishness, and  
a kind of Lassitude of the whole Body.

The putrid *Synochus* is known by the same Signs as the  
other, but these Signs are more manifest in this putrid Kind;  
the Heat, for instance, is more acrimonious; the Throat  
and Parts adjacent swell, and burn with Heat, so as to be an  
Impediment to the Patient’s Speech; the Eyes are full of hot  
Tears, and sometimes the Belly swells, and sounds, when  
struck, like a Drum. The Pulse is great, strong, swift and  
frequent, as in the other *Synochus*; but in this it is also un-  
equal, in the former not so. The Urine is thick, red, tur-  
bid, and void of Sediment. There are often exanthematous  
Eruptions on the Superficies of the Body, which are most  
commonly livid or black, and sometimes of other Colours.  
This Disorder generally ends on the fourth Day, and if it con-  
tinually increases, may endanger Life, particularly if the Tongue  
be rough and black, if the Eyes avoid the Light, and if the  
Urine appear like black Wine. Where these Symptoms are  
not seen, but the Fever decreases more and more, the Pa-  
tient seems to be in a safe Condition. When the Disease  
maintains itself in one constant State, it is safer than when  
it increases, tho’ less favourable than when it declines; which  
Observation is to be made, also, in the non-putrid *Synochus*.  
It is to be observed, that the *Synochus* usually happens only to  
Persons of a temperate Constitution, of a fleshy Habit, and  
abounding with no bad Blood; and that the Transition is  
easy from a non-putrid to a putrid *Synochus*, and from this to  
a continual Tertian.

What the *Greeks* call *Syneches*, and we *Febris continua*,  
“a continual Fever,” is a kind of putrid Fever resembling  
the putrid *Synochus* in the Continuation of the Paroxysms,  
but different from it in that it proceeds either from Bile or  
Phlegm, and has its Periods according to the Nature and Mo-  
tion of these Humors, in which, tho’ it does not totally cease,  
it yet remits, and gives the Patient Time for Refreshment;  
but the *Syneches* owes its Original to a putrefy’d Blood,  
and affords no Remission till the Time of the Crisis. To  
proceed, a continual Fever, is not preceded by a Ri-  
gor, Horror, or Coldness, but suddenly seizes the Patient  
all at once with a Heat, tho’ perhaps the corrupted Humor  
about the Præcordia may sometimes excite a Rigor or Hor-  
ror, for a short time, till it be overcome and subdued by the  
Fever. The Heat is always of a rough and acrimonious  
Quality, and especially at the Increase and Heat of the Pa-  
roxyfin. The Respiration and Pulse are unequal, and in this  
latter the Systole is perceived to be quick, and the Diastole  
slow. The Pulse, also, is sometimes quick, sometimes slow,  
sometimes strong, at other times weak; particularly in the  
Beginning of the Fit, or Paroxysm, it is quick and small; in  
the Height thereof it is not only quick, but remarkably great.  
The Urine in the Beginning is thick, red and turbid, and has  
neither Cloud, Encephaloma or Hypostasis; sometimes it is thin,  
but red, and not at all transparent; and all the Excretions,  
whether Stool, Urine or Sweat, have generally a rank and  
offensive Smell.

A continual *Quotidian* and *Quartan* are commonly very ir-  
regular, so as in one Day to have two or three Exacerbations,  
on another but one, or perhaps none at all; a continual  
*Quartan* is very rare, a continual *Quotidian* more frequent  
than the other; but the most frequent is a continual Tertian,  
by the *Greeks* called καύσος, (*Causus*) by us *ardens Febris*,  
“a burning Fever.” *Lomii Med. Obs.* See *Pyretos*.

**SYNOCHACHE.** σύνοχαχη, is expounded in *Erotian* on *Hip-  
pocrates*, by συνοχή καὶ συνόδος, “a continued Coherence and  
“Concourse.” The Word occurs in *Lib. de Offiis Natura*,  
where σύνοχα συνοχή is the Frame or Compages of the Breast.

**SYNOVIA**, a Term in *Paracelsus*, which he uses some-  
times in a physical Sense for the nutritious Juice appropriated  
to the Nourishment of any Part: Thus the nutritious Li-  
quor in the Joints, or rather in the Nerves which supply the  
Joints, is called by him *Synovia*, the white Glue of the Joints,  
otherwise *Hydanthros*, *Albicerta*, the Ichor of the Nerves.  
*Synovia*, in the same Author, is used in a pathological Sense  
for the Gout, or the Diseases of any Part where a Corruption  
of the proper nutritious Juice is the Cause of the Disorder.  
*Helmont*, *Dornaeus* and *Rulandus* describe the *Synovia* to be a  
pellucid Sort of Mucilage, like *Sperm*, or like the Liquor  
which distils from the Legs of a Calf, when his Feet are cut  
off. *Castellus*.

# SYR

**SYNTASIS.** σύντασις, from σύν and τίνω, to distend or  
stretch, a Distention; it is opposed to *Chalasis*, χαλασις, a Re-  
laxation, as σύνταξις, *Syntaxis* (*Medicamenta*) Medicines in-  
ducing a Tension are opposed to χαλαστικά, *Chalastica*, re-  
laxing Medicines. See *CHALAXIS* and *CHALACTICON*.

**SYNTAXIS.** σύνταξις, from τάττω, to order, or regulate,  
in *Galen*, *Lib. de Offiis*, signifies any Order or Composition  
of the Bones in general, and is there divided into *Arthron*  
and *Symphysis*. It is otherwise, as we are told, called *Synthe-  
sis*, σύνθεσις, and *Homilia*, ὁμιλία.

**SYNTENOSIS.** A Species of *Synneurosis*, in *Spigelius*,  
when two Bones are connected by a Tendon, as the *Offa Se-  
jamoidea* to the Bones of the Toes, and the *Patella* to the  
*Os Femoris* and *Tibia*. *Castellus*.

**SYNTEXIS.** σύντηξις, from σύν and τέκω, to liquefy, a Col-  
liquation. See *COLLIQUATIO*.

**SYNTHEA.** So *Paracelsus* calls a kind of Epilepsy, or  
apoplectic Disorder, attended with Gripes, and a Pain of the  
Stomach, which is generally mortal. *Castell*.

**SYNTHESES.** σύνθεσις, from σύν, together, and τίθημι, to  
put; Composition, in Anatomy, is the same as *Syntaxis*, which  
see. It is also one of the six Parts into which some divide  
the Art of Surgery, as we are told by *Heister*, the other five  
being *Diæresis*, *Exaresis*, *Aphæresis*, *Prosthesis*, and *Dior-  
thosis*; which see in their proper Places. *Synthesis* is also the  
Name of a Disease much like a Phthisis, in *Plinius Secundus*  
*de Re Medica*, *Lib. 2*.

**SYNTHETISMUS**, a Term used by some in Surgery to  
comprehend the four Operations in the Restitution of Frac-  
tures, which are *Extension*, *Coaptation*, *Reposition*, and *De-  
ligation*, or Bandage.

**SYNTHETOS.** σύνθετος, from σύν and τίθημι, to put or  
place; compact, is an Epithet applied by *Hippocrates*, *Coac.*  
110. to Fæces of a hard Consistence.

**SYNTOMOS.** σύντομος, from σύν and τέμνω, to cut; con-  
cise, short, quick, is sometimes, if the Word be not cor-  
rupted, put for vehement and intense. Thus πόνος σύντομος, *Coac.*  
160. signifies violent Pain; but *Fæsius* thinks we should read  
σύντονος, and observes that σύντομος is often read corruptly for  
σύντονος, which signifies intense. The Adverb σύντομως signifies  
soon, speedily, shortly, for instance, 3 *Aph.* 12. καλὰ ἔγγροι συν-  
τόμως ἀπολλύντες, are “Defluxions which soon prove mortal.”

**SYNTONIA.** συντονία, from σύν and τίνω, to stretch, sig-  
nifies Strength and Firmness of Tone. *Galen*, *Com. 4. in*  
*Lib. de R. V. J. A.* explains συντονίαν κατὰ τὰς φλέβας, “a *Syn-  
tonia* of the Veins,” by πύκνωσις, a Denseness, or a Thick-  
ness of the Coats of the Veins, which he makes the Cause  
of the Stillation or Falling of Blood by Drops from the  
Nose; σύντονος πόνος, *Coac.* 160. is intense or vehement Pain.

**SYNTROPHOS.** σύντροφος, from σύν and τρέφω, to nourish;  
nourished together, is expounded by *Galen*, *Com. 2. in Lib.*  
καὶ ἡλεῖτον, by οικῆσις, familiar, accommodated, convenient.  
*Σύντροφος νόσος* is a Disease which is nourished and grows up with  
the Patient; thus, *Lib. de Morbo Sacro*, the Epilepsy is said  
to be ἡ νόσος ἐκ παιδὸς συντροφος, “a Disease nourished and  
“growing with a Person from a Child.

**SYNULOTICON.** συνολωτικόν, is the same as *Epuloticum*.  
*Galen de M. M. Lib. 13. Cap. 5.* See *EPULOTICA*.

**SYNYMENSIS**, in *Spigelius*, is a Species of Conjunction  
of two Bones by means of a Membrane; as, for instance,  
in new-born Children, the Bones of the Sinciput are connec-  
ted to the *Os Frontis*.

**SYPHAR.** The same as *EXUVIÆ*, which see.

**SYPHILIS.** See *SIPHILIS*.

**SYRIACON.** An Epithet of an Ointment, called also  
*Commagenum*, or *Comagenum*. See *COMMAGENUM*. The  
*Lapis Judaicus* is also called *Syriacus*; for *Ulcus Syriacum*,  
see *TONSILLÆ*.

**SYRICON**, according to *Paulus Aegineta* and *Aetius*, is the  
same as *Sandyx*; but *Pliny* makes it a Composition of equal  
Parts of *Sandyx* and *Sinopsis*. It is also the Name of a Col-  
lyrium described in *Aetius*, *Tetrab. 2. Lib. 3*.

**SYRINGA.**

The Characters are;

The Calyx is monophyllous, and divided into four large  
and expanded Segments. The Flower is rosaceous and pen-  
tapetalous, or tetrapetalous, and furnished with Stamina to  
the Number of Sixteen. The Ovary in the Bottom of the  
Calyx is adorned with four erect, apiculated Tubes, and be-  
comes a turbinated, quadricapsular Fruit, growing to the Ca-  
lyx, gaping into four Parts, and pregnant with small Seeds.

*Boerhaave* mentions two Sorts of *Syringa*, which are;

1. *Syringa*; alba; five *Philadelphus Athenæi*. *C. B. P.*  
398. *Frutex Coronarius*, *Clus. H.* 55.
2. *Syringa*; flore albo, pleno. *C. B. P.* 398. *Boerb. Ind.*  
*Alt. Plant.*

It is called *Syrinx*, from σύριξ, (*Syrinx*) a Pipe, because  
the Branches, when the Pith is taken out, may serve for  
Pipes



Pipes in Syringes ; but I find no medicinal Virtues ascribed to it. *Hist. Plant. ascript. Boerh.*

SYRINGOTOMIA, *συγγυτομία*, from *σύριγξ*, a Fistula, and *τέμνω*, to cut ; Syringotomy, or cutting for a Fistula.

SYRINGOTOMUM, *συγγυτόμιον*, of the same Original with the preceding, is a Surgeon's Instrument for cutting a Fistula.

SYRINGOTOMUS. The same with SYRINGOTOMUM.

SYRIX. See FISTULA.

SYRIUS. A Name for a strong cathartic Powder prepared of Scammony, being no other than an Extract, Refine, or Magistery of that Drug.

SYRMA, *σύρμα*. The same as APOSYRMA, or ABRA-SUM, which see.

SYRMÆA, *συρμαίνῃ ἢ συρμαία*, as some say, is a Species of *Raphanus*, so called [from *σύρω*, *syro*, to draw] because it was proper to provoke Vomiting ; *συρμαία* was also a sort of Sweetmeat prepared of Honey and Fat, which was the Prize of a certain Game or Exercise among the *Spartans* ; also a Purgative Potion composed of Salt and Water. The Scholiast on *Aristophanes*, in *ἐκθύνη*, says, that the *Syrmæa* was the Juice of a certain Herb with which the *Egyptians* used to purge themselves ; and it seems to be the Juice of the *Raphanus*, which, mixed with Salt, was a common Purge among that People. *Varinus* says, that the *Syrmæa* works both by Stool and Vomit, whence comes the Word *Syrmæsmus*, which signifies a moderate Purging, whether upward or downward ; and *Galen* also tells us, *Com. 2. in Lib. de Artic.* that a moderate Evacuation whether by Stool or Urine, was called by the Antients *Syrmæsmus*. *Erotian* on *Hippocrates* says, that the *Syrmæa* is a long sort of *Raphanus*, which with Brine was used in Food, in order to excite a kind of Purging, which they call *Syrmæsmus*, by which he means Vomiting. *Paulus*, *Lib. 1. Cap. 100.* informs us from *Diocles*, that *Syrmæsmus* with the Ancients signified *ἕστως ἑμῆς*, “ fasting Vomits ;” that is, provoked by some Medicine taken fasting, and the Verb *Syrmæzo* expressed the Action of using that kind of Evacuation ; for which purpose he prescribes small Radishes, Nasturtium, Eruca, Mustard and Purslain, to be taken in warm Water. Some commenting on this Place observe, that *Syrmæa* signifies a Drink prepared of Water and Barley ; and in *Diodorus Siculus*, Provisions for Food. Thus, *Syrmæam facere*, “ to make the “ *Syrmæa*,” is to provide Victuals. The *Syrmæa*, in *Hippocrates*, seems to be some Potion or Juice, in which he orders his Medicines to be taken ; particularly, *Lib. 11. περὶ γυναικῶν*, he orders the *Conyza Odorata* to be made into a Mafs with Honey and Rosin, and taken in *Vinum odoratum* or *Syrmæa*, in order to expel the Fœtus and Secundines ; and in the same Book he advises *Ærugo* with Honey to be taken in *Syrmæa*. *Herodotus* in *Euterpe*, speaking of the Manners of the *Egyptians*, says, “ As to their Way of Living, every “ Month, for three Days together, they provoke Evacuation “ with *Syrmæa*, *συρμαίνουσι*, taking care, by Vomiting and “ gentle Purges, to preserve their Health ;” and describing their Manner of preserving dead Bodies, he says, “ that “ the third Way of preparing the Bodies, and which was “ used by those of meaner Fortunes, was, first, to cleanse “ out the Belly with Percolations of *Syrmæa*, and after- “ wards to let it lie in Salt for seventy Days.” Where by *Syrmæa*, *Hermolaus Barbarus* assures us, is meant a Species of *Raphanus*. *Forsius*.

SYRMÆSMUS. See the preceding Word.

SYRONES. See SIRENES.

SYRRHOËA, *σύρροια*, ἢ *σύρρονα*, from *σύν* and *ῥέω*, to flow, a Conflux. *Hippocrates*, *Lib. de Aliment.*

SYRUPUS. A Syrup.

As various Simples, such as Herbs, Roots, Seeds, Fruits and Flowers, together with their Juices, cannot always be had, especially in the Winter and Autumn, in order to prepare Decoctions, Infusions, and other Medicines, suited to particular Intentions ; as the Virtues of these Simples cannot be long preserved ; and as some Disorders are so violent and acute as not to afford Time sufficient for reducing them into various Forms, in order to extract their Qualities ; so Syrups became necessary, since by means of this Formula the various Virtues of Roots and Plants might speedily, and without Delay, be used for answering different Intentions, according to the different Qualities of these Roots or Plants.

The Word *Syrup*, as is shewn under the Article *SIRPHIUM*, is derived from the *Chaldean*, *Sirpi*.

Syrups were first invented by the *Arabian* Physicians, and were unknown to the ancient *Greeks* ; since *Hippocrates* and *Galen* only make mention of *Oxymel* and *Mulfum*. But the *Moors*, in Imitation of the *Arabians*, enriched the pharmacutic Part of their Medicine with various Kinds of Syrups.

A Syrup is a liquid Form of Medicine, prepared of Decoctions, Juices, or Infusions, preserved by means of Honey

or Sugar, and reduced to such a Consistence, that a Drop let fall on a Marble does not spread.

Syrups, like all other Official Preparations, may be made to answer various Intentions ; and consequently may be either of a cooling, heating, drying, inciding, expectorating, incrassating, diuretic, sudorific, lithontriptic, alexiterial or corroborating Quality, according to the different Virtues of the several Ingredients of which they are prepared.

Syrups are used either alone, and without any Admixture of any other Substance ; or they are dissolved and diluted in some proper Liquor.

Unmix'd Syrups, or such as are not diluted with any Liquor, cannot (before their Virtues are in a great measure lost) penetrate so far, nor act so quickly and easily on the Parts affected, or the Humours to be alter'd, as Syrups diluted to the Consistence of a Julap, which, in consequence of their destroyed Viscidity, penetrate more expeditiously, arrive at the Parts affected, and mix with the noxious Humours before their Virtues are considerably lost. Hence 'tis obvious, that either unmix'd Syrups, or such as are diluted, are to be exhibited according to the different Parts affected, the Diversity of Diseases, and the Variety of their productive Causes.

Thus undiluted Syrups are universally prescribed ;

1<sup>mo</sup>. For preventing and checking, by their tenacious Consistence, Defluxions on the Fauces, Lungs, and Stomach ; for which Purpose they are to be long retained in the Mouth.

2<sup>do</sup>. For removing Hoarseness, and the Asperity or Roughness of the *Aspera Arteria*, which Intentions they excellently answer by their tenacious Lensor. For these Purposes they are to be gradually swallowed or lick'd out of a Spoon, like a *Linctus*.

3<sup>io</sup>. For Expectoration, and the Elimination of any solid Matter collected and infarcted in the Lungs ; for which Purposes they are to be licked out of a Spoon, or taken with a Piece of Stick-liquorice.

4<sup>to</sup>. For alleviating Coughs ; for which Purpose they are to be taken in the same Manner.

5<sup>to</sup>. For Disorders of the Stomach, and Parts adjacent, to which they easily penetrate without a Vehicle.

Diluted Syrups, on the contrary, or such as are reduced to the Form of a Julap, are prescribed ;

1<sup>mo</sup>. For Disorders of the Liver, Spleen and Mesentery.

2<sup>do</sup>. For various other Disorders, especially of the Head, Heart, Lungs, Kidneys, Bladder, Uterus and Limbs, to which the Virtues of Syrups alone can hardly, if at all, be convey'd, unless they are diluted.

Syrups are generally order'd to be diluted in some proper Liquor, adapted also to remove the particular Grievance for which the Syrup is prescribed. But the Liquors most commonly used for this Purpose, are distilled Waters, or Decoctions, which are more efficacious than Water ; as also Broths prepar'd of Fowls, either alone or boiled with proper Roots and Flowers.

In determining the Doses of Syrups, we are to have a due Regard,

1<sup>mo</sup>. To the Situation and Condition of the Parts affected ; for if the Virtue and Efficacy of the Syrup are to be convey'd to remote and distant Parts, a proportionably large Dose is to be exhibited, otherwise little or no Effect will be perceived ; because by the Length of the Passage, the Virtues of the Syrup will be greatly impair'd.

2<sup>do</sup>. To the Virulence of the Disorder, and the Strength of the morbid Cause.

3<sup>io</sup>. To the Age and Habit of the Patient.

4<sup>to</sup>. To the Virtue and Efficacy of the Syrup itself.

5<sup>to</sup>. To the Manner in which the Syrup is taken ; for as large Quantities of Syrups cannot be taken at once, in order to remove several Disorders of the *Aspera Arteria* and Lungs, so the Doses are to be frequently repeated. The same Rule is, also, to be observed in the Use of such Syrups as are exhibited for extinguishing Thirst.

As for the Quantity of Liquor used in diluting Syrups, it is the same as in Julaps ; only the Quantity is to be augmented when the Intention is to allay Thirst excited by Fevers and other acute Disorders, especially in the Summer Time.

The Time most proper for exhibiting Syrups, is to be estimated from the Intention of their Exhibition : Thus Syrups design'd to prepare and digest the Humours, are to be exhibited in the Morning, four or five Hours before Eating, that their Virtues may not be obtunded by Aliments lately taken, or as yet not digested.

These Directions principally belong to the Syrups of the alterant Kind ; and as for those of a purgative Quality, they are to be exhibited at the same time, and with the same Precautions, as other Purges ; only 'tis to be observed in general, that Syrups are better adapted to chronical than to acute Disorders. *Petr. Morell. de Formul. Remed.*

In making the Official Syrups to the best Advantage, some



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some principal Qualities in the Things themselves, before such a Process is entered upon, ought to be particularly regarded. The most simple Treatment in this Form, is the dissolving Sugar enough in the Juice, or Infusion of some Things, to give it a Consistence for keeping; the Proportion required for this purpose is generally double the Quantity of Sugar to that of the Liquor; and where it is ordered with less Sugar, Boiling is required to bring it to a due Consistence.

Among the Materials thus ordered, all Acids ought to have their due Quantity of Sugar to bring them to a Consistence without Boiling; because the very Action of much Heat upon them destroys their Acidity, and makes them liable to candy; and this more particularly holds good, where a Juice hath any Fragrancy in Flavor, as that of Oranges, Lemons, Citrons, and the like; because Boiling also exhales and destroys that Fragrancy. Such Infusions, also, as give to a Syrup a desirable Colour, ought at once to be so charged with Sugar as not to require Boiling; because their Colours, by such Procedure, would be spoiled; as with the Violets, red Poppies, Cloves, and the like; none of which can bear the Fire without Detriment.

The alterant Syrups, either simple or compound, which are made from Decoctions, and take not in Sugar enough to give them a due Consistence without boiling, require Clarification most, which is commonly done with the Whites of Eggs; but this Addition to their Beauty, is an Injury to their Virtues, where any thing mucilaginous or viscid is required. But among this whole Tribe, this Caution is no where so necessary as in the *Syrupus de Meconio*. What is taken from the Poppy, and which solely gives the Virtue to this Syrup, will make a Decoction thick; and if that be taken out by Clarification, the Medicine becomes of little or no Effect; so that a certain Way to know when this may be trusted to is, by making a Draught thick and foul, and depositing a light Sediment upon Standing.

There are so many under this Title of Syrups yet retained in the Dispensatory, which are hardly ever made or prescribed, that the particular Examination of them would be a needless Trouble; and therefore it may be sufficient to observe, that these are the *Syrupus de Absinthio simplex*, justly neglected for its Nauseousness; the compound Syrup under the same Title; the *Syrupus de Artemisia*, de *Eryfino*, *Myrtinus*, de *Pomis alterans*, de *Paconia compositus*, de *Præffio*, de *Stæchade*, de *Symphyto*; and, among the Purging Syrups, the *Syrupus de Cichoreo cum Rhabarbaro*, de *Pomis purgans*, and *Rosaceus solutivus* cum *Sena*.

Of those which are frequently in Use, the *Syrupus de Althæa* is the most considerable Compound; but if we examine the Efficacies or Fitness of the several Ingredients for this Form, we shall soon discover the Reason why it is now frequently ordered in its Decoction, to be used like a common Apozem, in large Draughts at a time; by which way it is certainly a good Emollient, and serviceable in nephritic Disorders, by lubricating the Passages; but if a Quart or two of this may safely be drank in a Day, little Consequence can be expected from what Syrup can be taken in the same time.

The same holds good in the *Syrupus Capillorum Veneris*, *Syrupus de Glycyrrhiza*, and the *Syrupus à quinque Radicibus*; for their Decoctions may be drank in large Quantities with Safety, and require to be so taken, when any thing is expected from them; so that all these Things are of use in Syrups only to sweeten Decoctions, or Juleps of like Intention; or else to make up Boluses and EleQuaries into a due Consistence.

The *Syrupus de Alentha* is a Composition of some Efficacy, being a grateful Astringent. But even this ought to be trusted to only as a weak Auxiliary. The same is observable of the *Syrupus de Rosæ siccis*.

The *Syrupus de Cinnamon* may answer the Intention of a Restringent; but its spicy and cordial Quality must necessarily be lost in the long Boiling that is required, to give it Consistence, with half a Pound of Sugar to one Pint of Water. The other Spices and Seeds directed to be made into Syrups after the same manner, are liable to the same Inconveniences; as are, also, the Syrups from the Citron, Orange, and Lemon-Peels. But all the Flavour from these Ingredients, which can be retained in a Syrup, as this Form is commonly kept in the Shops in open Pots, or those loosely covered, is soon lost by standing; so that such Things are to great Disadvantage ordered this Way. The *Syrupus Balsamicus* is liable to the same Loss, but is directed with the utmost Care, to preserve its more fragrant and volatile Parts. This last mentioned Syrup is frequently, for Cheapness, made with Storax or Benjamin, or both; the Difference being hardly discoverable, and the Fraud of no very ill Consequence.

The first Way directed to make the *Syrupus Chalybeatus* is hardly practicable, because the *Sal Martis* does not seem dis-

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solvable in the compound Gentian Water; and as the *Syrupus de Pomis alterans* is scarce ever made, this Way I believe has never been tried. That with only Steel, Wine, and Sugar, is the old and common Way of making it, but it is very subject to run into Candy; as is also the *Syrupus Croci*, and any other of this Form made with a vinous Liquor, because the Sugar is not so naturally suspended in them, as in Water and the thicker Fluids; and therefore they are more ready to shoot into Crystals.

Amongst the purging Syrups, the first from Succory with Rhubarb has been formerly much esteem'd; but the whole Croud of Ingredients in it, which have been thought either Correctors or Purgers of Bile, are now known to be of so little Efficacy as to any such Purposes, that they are grown into Neglect; and that shorter Composition, which bears the Title of *Syrupus de Rhabarbaro*, is now much more valued, though the Violet Flowers, the Succory and Fennel Waters seem but very insignificant Ingredients.

The *Syrupus e Floribus malorum Persicorum*, which orders the Infusion to be five times repeated with fresh Flowers, is commonly made with one Infusion only, with just Water enough to cover and scald the Flowers; and that proves a good gentle Emetic or Purge to young Children; the other Way would certainly render it stronger; but so very few care for the Trouble, that I never yet met with any who would vouch for its being thus made. The *Syrupus rosaceus solutivus* is directed somewhat in the same manner, but a stronger Infusion of the dried Damask Roses, or the Residuum after Distillation, will make it with less Trouble and full as good, if not better, than is here ordered by frequent Infusions, or from the expressed Juice.

The Syrup of Buckthorn is of Strength sufficient to require not above two Ounces for its largest Dose, which may conveniently enough be given; but the customary Way of putting in the Spices hath been in a thin Bag, during its boiling to a Consistence; and the less time they are exposed to such Treatment the better. *Quincy's Prelections*.

The Syrups directed by the College are the following.

### SYRUPUS DE ABSINTHIO SIMPLEX.

*The simple Syrup of Wormwood.*

Take of the clarified Juice of common Wormwood, and of clarified Sugar, of each four Pounds; and boil them together into the Consistency of a Syrup.

After the same Manner are prepared the simple Syrups of the Juice of Succory, of Ground Ivy, of Raspberries, of the outer Peel of Walnuts, of Coltsfoot; and also of other Juices that are not acid.

### SYRUPUS DE ABSINTHIO COMPOSITUS.

*Compound Syrup of Wormwood.*

Take of common Wormwood moderately dried half a Pound, of red Rose Leaves, two Ounces; of Spike-nard, three Drams; of old strong white Wine, and Juice of Quinces, of each two Pounds and a half. Let them infuse together warm in an earthen Vessel for a whole Day, then gently boil in a Bath Heat, and strain out the Liquor; and with two Pounds of white Sugar, boil it up to the Consistence of a Syrup.

### SYRUPUS ACETOSUS.

*Syrup of Vinegar.*

This is made by dissolving with a gentle Fire, five Pounds of Sugar in one Quart of the best White Wine Vinegar.

This is reckoned good to expectorate and cut Phlegm, and in such Intentions any other Syrup may be helpful; because the Sugar itself has a Tendency that Way.

### SYRUPUS DE ALTHÆA. See ALTHÆA.

### SYRUPUS DE ARTEMISIA.

*Syrup of Mugwort.*

Take of Mugwort, two Handfuls; of Penny-royal, Calamint, Origany, Baum, Dittany of Crete, Savine, Marjoram, the lesser Centory and Rue, of each one Handful; of Fennel, Smallage, and Parsley Roots, of each one Ounce; of Juniper Berries, of the Seeds of Lavage,



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vage, Parsley, Smallage, Cubebs, and the Roots of Asa-num, of each half an Ounce. Let these be cleansed, cut and bruised, as they require, and boil then in six Quarts of Water to four Quarts. To the expressed Li-quor, add of Cinnamon and Spikenard, of each three Drams; of white Sugar, six Pounds; and boil up to a Syrup. *S. A.*

SYRUPUS BALSAMICUS. See BALSAMUM TOLU-TANUM.

SYRUPUS DE BERBERIS.

*Syrup of Barberries.*

Take two Pints of the fine Juice of Barberries, and one Pound and a half of very fine Sugar: Boil them in an earthen glazed Vessel to the Consistence of a Syrup.

SYRUPUS CAPILLORUM VENERIS.

*Syrup of Maiden Hair.*

Take of Maiden Hair, five Ounces; of Liquorice Root, two Ounces: Infuse them for twenty four Hours in six Pints of hot Water; then after a gentle Boiling in a Bath Heat, press out the Liquor; and to four Pints of it clarified, put of Sugar three Pounds, and boil up to a Syrup.

SYRUPUS INFUSIONIS FLORUM CARYOPHYL-LORUM. See CARYOPHYLLUS.

SYRUPUS CHALYBEATUS.

*Syrup of Steel.*

Take of the Salt of Steel, two Drams; dissolve it in one Ounce of compound Gentian Water; and add to it nine Ounces of the alterant Syrup of Apples. Or otherwise,

Take equal Quantities of Steel Wine and Sugar, and boil them into the Consistence of a Syrup.

SYRUPUS CICHOREI CUM RHABBARO. See RHABBARUM.

SYRUPUS DE CINNAMOMO.

*Syrup of Cinnamon.*

Take of the best Cinnamon a little bruised, three Ounces; infuse it for three days in a sufficient Quantity of hot Spring Water, to strain off one Pound, and put to it half a Pound of the finest Sugar; and with a gentle Heat boil it up to a Syrup.

SYRUPUS E SUCCO CITRIORUM. See CITREUM.

SYRUPUS CORTICORUM CITRIORUM. See Ci-TREUM.

SYRUPUS CROCI. See CROCUS.

SYRUPUS CYDONIORUM. See CYDONIA.

SYRUPUS DE ERYSIMO. See ERYSIMUM.

SYRUPUS DE GLYCYRRHIZA.

*Syrup of Liquorice.*

Take of fresh Liquorice, cleansed and bruised, two Ounces; of white Maiden Hair, one Ounce, of Hyssop, half an Ounce. Pour upon these three Pints of boiling Spring Water; and after twenty four Hours Infusion in a Bath Heat, strain out the Liquor and clarify it; and with the best Honey and fine Sugar, of each ten Ounces, boil it up to a Syrup in a Bath Heat. *S. A.*

SYRUPUS GRANATORUM.

*Syrup of Pomegranates.*

Take of white Sugar, one Pound and a half; of the Juice of Pomegranates made fine, one Pound. Let it be brought into a Syrup with a Bath Heat.

SYRUPUS DE MECONIO, SIVE DIACODION. See DIACODION.

SYRUPUS DE MENTHA.

*Syrup of Mint.*

Take of the Juices of sweet and sub-acid Quinces, and of the Juice of sweet and acid Pomegranates, of each one

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Pound and an half; of dried Mint half a Pound; of red Roses two Ounces. Let them stand in Maceration one whole Day; then boil in a Bath Heat to a Consumption of half, strain the Liquor, and with four Pounds of Sugar make it into a Syrup.

SYRUPUS MYRTINUS.

*Syrup of Myrtles.*

Take of Myrtle Berries, two Ounces and an half; of the white and red Sanders, of Sumach, of Balauftines, Barberries, and red Roses, each one Ounce and a half; of Medlars sliced, one Pound, bruise as required, boil in eight Pints of Water to four Pints; and to that, when strain'd, add of the acid Juice of Quinces and Pomegranates, each six Ounces. Then with four Pounds of Sugar boil into a Syrup, adding the Juice towards the latter End.

SYRUPUS DE PÆONIA COMPOSITUS.

*Compound Syrup of Peiony.*

Take of fresh Piony-Roots, both the Kinds, cut into Slices, and infused a whole Day in white Wine, of each one Ounce and an half; of Contra-yerva Root, half an Ounce; of common Hartwort, six Drams; of Rose-mary with its Flowers, one Handful; of Betony, Hyssop, Origany, Ground-Pine, and Rue, of each three Drams; of Aloes Wood, Cloves, and the lesser Cardamoms, of each two Drams; of Ginger and Spikenard, of each one Dram; of Stæchas and Nutmegs, of each two Drams and a half. After one Day's Infusion in six Pints of warm Spring-water, boil in a Bath-Heat to the Consumption of a third Part; and to the Liquor afterwards strained through a Flannel Bag, put four Pounds and a half of the finest Sugar, and boil up into a Syrup with a moderate Heat.

SYRUPUS DE PAPAVERE ERRATICO.

*Syrup of wild Poppies.*

Take of the fresh Flowers of wild Poppies two Pounds, and pour upon them two Quarts of Spring-water; the next Day press it out, and repeat the Infusion with fresh Flowers, and then make it into a Syrup in a Bath-Heat, with as much Sugar as there is of the strained Liquor.

SYRUPUS E FLORIBUS MALORUM PERSI-CORUM.

*Syrup of Peach-Flowers.*

Take Flowers of Peaches, one Pound, and pour upon them three Pints of boiling Water; after twenty four Hours steeping, press out the Liquor, and repeat the Infusion with a fresh Quantity of Flowers five times; then in the last Straining dissolve two Pounds and a half of Sugar, and boil it up to a due Consistence.

It is a pretty Puke for Children, and opens a little down-wards; for which purpose it is much in Use. The Dose is from two Drams to one Ounce.

SYRUPUS DE PETO.

*Syrup of Tobacco.*

Take of the Juice of English Tobacco three Pounds; of simple Oxymel four Ounces; of Mead one Pint. Digest them together for four Days; then to the clear strained Liquor put two Pounds of Sugar, and make into a Syrup.

This is designed for an Emetic.

SYRUPUS DE POMIS ALTERANS.

*The Alterant Syrup of Apples.*

Take of the Juice of fragrant Apples four Pints; of the Leaves of Garden and wild Buglass, and of Violet Flowers, each one Pound: Boil in a Bath-Heat, and to the clear-strained Liquor put seven Pound of the finest Sugar, with one Pint of Damask Rose-water, and make into a Syrup.

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### SYRUPUS DE POMIS PURGANS.

*Purging Syrup of Apples.*

Take two Pints of the Juice of fragrant Apples; of the Juices of Borrage and Bugloss, of each one Pint and a half; of the Leaves of Sena picked from the Stalks and Dust, two Ounces; of Aniseeds half an Ounce; of Saffron tied into a little Knot, one Dram. Let the Sena and Aniseeds steep in the Juices; and after that is continued twenty four Hours, and they have been just boiled together, strain out the Liquor; to which add two Pounds of white Sugar, and squeezing the Knot of Saffron frequently between whites, let it be boiled into a Syrup.

### SYRUPUS DE PRASSIO.

*Syrup of Hore-hound.*

Take of the Leaves of fresh white Hore-hound two Ounces; of Liquorice, Polypody of the Oak, Smallage, and sweet Fennel Roots, of each an Ounce; of the Leaves of white Maiden-Hair, Origanum, Hyssop, Calamint, Thyme, Scabious, Savory, and Coltsfoot, of each six Drams; of the Seeds of Anise and Quinces, of each three Drams; of stoned Raisins two Ounces; of fat Figs, No. 10. Let these stand in a warm Digestion for a whole Day, in one Gallon of thin Mead; then boil in a Bath-Heat, and to five Pints of the Liquor strongly pressed out, and settled clear, put two Pounds of clarified Honey and as much Sugar, and boil up to a Syrup; which may be flavoured with one Ounce of Florentine Orrice-Root.

### SYRUPUS DE QUINQUE RADICIBUS.

*Syrup of the five aperient Roots.*

Take of the Roots of Butchers-Broom, sweet Fennel, Asparagus, Parsley, and Smallage, of each two Ounces; of Spring-water three Quarts. Digest them together warm, and boil them in a Bath-Heat. To two Quarts of the Liquor strongly pressed out and clarified, put five Pounds and a half of fine Sugar, and make into a Syrup in the same Heat; adding to it at the latter End eight Ounces of Vinegar.

### SYRUPUS DE RHABBARBARO.

*Syrup of Rhubarb.*

Take of the best Rhubarb, and of Sena Leaves, of each two Ounces and a half; of Violet Flowers one Handful; of Cinnamon one Dram and a half; of Ginger, half a Dram, of Succory, and Fennel Waters, of each four Pints. Let them steep a whole Night warm, and then boil the strained Liquor up into a Syrup with two Pounds of white Sugar towards the latter End, mixing with it two Ounces of the solutive Syrup of Roses.

SYRUPUS ROSACEUS SOLUTIVUS. See ROSA.

SYRUPUS E SUCCO ROSARUM. See ROSA.

SYRUPUS DE ROSIS SICCIS. See ROSA.

### SYRUPUS DE SPINA CERVINA.

*Syrup of Buckthorn.*

Take of the Juice of ripe and fresh Buckthorn Berries gathered in the Month of September, two Pints; let the Faeces subside, and to the clear Liquor add of Cinnamon and Nutmegs, each three Drams; and let them stand in Maceration for the space of one whole Day; then strongly press it out, and put to it one Pound and a half of white Sugar, to be boiled up to the Consistence of a Syrup in a Bath-Heat.

### SYRUPUS DE STOECHADE.

*Syrup of Stoechas, or French Lavender.*

Take of Stoechas Flowers four Ounces; of Rosemary Flowers half an Ounce; of the Herbs of Thyme, Calamint, and Origanum, each one Ounce and an half; of the Seeds of Rue, Peony, and sweet Fennel, each three Drams. Digest these for one or two Days in a suf-

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ficient Quantity of hot Spring-water, to press out five Pints clear; to which add of the finest Sugar five Pounds and an half, and make into a Syrup by a Bath-Heat, according to Art. It may be aromatized with some Drops of the distilled Oil of Cinnamon.

### SYRUPUS DE SYMPHYTO.

*Syrup of Comfrey.*

Take of the Roots and Leaves of the Greater and Lesser Comfrey, each three Handfuls; of fresh red Roses, Leaves of Betony, Plantain, Pimpernel, Knot-Grass, Scabious, and Coltsfoot, each two Handfuls; bruise them, and press out their Juice; to each Pound of which put one Pound of Sugar; in the Boiling take off what Scum rises, until it is of a due Consistence for a Syrup.

### SYRUPUS VIOLARUM.

*Syrup of Violets.*

Take of fresh Violet Flowers clean picked one Pound, and pour upon them two Pints and an half of hot Water; cover them down close in a new earthen glazed Pot for a whole Day, and then squeeze out the Liquor with a Press; and to every Pint of it put two Pounds of fine Sugar, which dissolve in a Bath-Heat, and take off what Scum arises during its Continuance over the Fire.

### SYRUPUS E SUCCO VIOLARUM.

*Syrup of the Juice of Violets.*

This is made with the expressed Juice and double the Quantity, at least, of Sugar melted in a gentle Bath-Heat; as directed in the preceding.

Besides these there are a great many other Syrups, perhaps not inferior in Virtues, and consequently not less useful. The following are taken from *Lemery's Pharmacopée universelle*.

### SYRUPUS ANTI-ASTHMATICUS ANT. DAQUIN.

*The antiasthmatic Syrup of Anthony Daquin.*

Take of well-cleaned Barley, two Ounces; of the Roots of Butterbur, Elecampane, Smallage, Fennel, Liquorice, and of well-cleaned Damascus Raisins, each an Ounce and an half; of enucleated Dates, twelve; of Jujubes and Sebestens, each thirty; of the Leaves of Coltsfoot and Lungwort, of the Tops of Hyssop and white Horehound, and of true Maidenhair, each one Handful; of the Seeds of Anise and the Cotton Bush, each half an Ounce; and of the Flowers of Coltsfoot and Catsfoot, each half an Handful; make into a Syrup.

For this Purpose, the Barley is first to be boiled in nine Pints of Water for about half an Hour, then we are to add the Roots cut into small Pieces, then the Fruits opened and cleansed, and then the Leaves, Seeds, Flowers and Liquorice bruised. When the Decoction is boiled to about a third Part, permit it to become half cool, strain it and mix the Sugar with it. Clarify the Mixture with the White of an Egg, and boil it to the Consistence of a Syrup; which, when cold, is to be rendered of an aromatic Flavour, by an Elæosaccharum prepared of six Drops of the distilled Oil of Anise, two Drops of the Oil of Cinnamon, and a sufficient Quantity of the Powder of Sugar-candy.

This Syrup incises and disengages thick Phlegm, assists Respiration, removes Obstructions of the Lungs and Diaphragm, and is beneficial against Asthmas and inveterate Coughs.

The Dose is from half an Ounce to an Ounce.

### SYRUPUS ANTI-EPILEPTICUS ANT. DAQUIN.

Take of Birdlime, and the Roots and Seeds of male Piony, each two Ounces; of the Roots of the greater Valerian, Angelica, Master-wort, Illyrian Orris, and white Dittany, each one Ounce; of the Leaves of Betony and Rue, and of the Flowers of Lilly of the Valley, the Lime-tree and Lavender, each one Handful; and of the white Tartar of Montpellier, one Ounce and an half; make into a Syrup.



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For which Purpose we are to choose all the Ingredients good, and cutting them in Pieces and bruising them, we are to put them into a large Matrafs; then we are to pour upon them of the Waters of black Cherries and Lime-tree Flowers, each three Pints; then stopping the Matrafs close, we are to put it in a tepid *Balneum Mariæ*, where the Ingredients are to digest for twenty-four Hours: Then the Water of the Bath is to be set a boiling for two or three Hours, after which the Infusion is to be strained and expressed; then four Pounds of Sugar are to be mixed with it, after which it is to be clarified with the white of an Egg, and boiled over a slow Fire, to the Consistence of a Syrup, which, when cold, is to be rendered of an aromatic Flavour, with an *Elæosaccharum*, prepared of the distilled Oils of Lavender and Cinnamon, together with a sufficient Quantity of the Powder of Sugar-candy.

This Syrup is good against Epilepsies, Apoplexies, Palseys, and other Disorders of the Brain.

The Dose is from half an Ounce to an Ounce and an half.

### SYRUPUS ANTINEPHRITICUS ANT. DAQUIN.

*The antinephritic Syrup of Anthony Daquin.*

Take of the Roots of Marsh-mallows, Rest-harrow, Strawberries, Burdock, Water Lily, and the five aperient Roots, each one Ounce and an half; of Winter-cherries and Dog-hips, each three Ounces; of the Seeds of Burdock, Gromwel, Mountain Hartwort, the four cold Seeds well cleansed, and the Kernels of Medlars and Peaches, each one Ounce; of the Leaves of Sassafras, Burnet, Chervil, Golden-rod, Saint John's-wort, and true Maidenhair, each one Handful; and of white Tartar reduced to Powder, two Ounces; make into a Syrup in the following Manner:

Cleanse the Roots and cut them into small Pieces, reduce the white Tartar to a gross Powder; boil all together in ten Pints of the distilled Water of Pellitory of the Wall, over a gentle Fire, for about an Hour; then add the Fruits opened, then the Kernels and Seeds bruised, and last of all the Leaves cut small. The Decoction is to be boiled into about an half; after which four Pounds of Sugar are to be added; then the Mixture is to be clarified with the white of an Egg, and boiled to the Consistence of a Syrup, which is to be rendered of an aromatic Flavour with six Drops of the Essence of Anise reduced to an *Elæosaccharum*, with about half an Ounce of the Powder of Sugar-candy.

This Syrup resolves the Stone, attenuates and eliminates the Phlegm lodged in the Kidneys, Ureters and Bladder, provokes Urine, and is good for the green Sicknefs.

Its Dose is from half an Ounce to two Ounces.

### SYRUPUS ANTISCORBUTICUS ANT. DAQUIN.

*The antiscorbutic Syrup of Anthony Daquin.*

Take of the Roots of male Fern, Angelica, Eringo, and Horse Radish, each three Ounces; of Citron and Orange Peel, each two Ounces; of the Leaves of Baum, Fumitory, Spleen-wort, Scurvy-grafs, Brooklime, Water-creffes, Money-wort, and Mint, each three Handfuls; of the Seeds of Garden-creffes, *Carduus Benedictus*, and Citrons, each one Ounce; of the Flowers of Broom and Clove July-Flower, each one Handful; and of white Tartar, two Ounces; make into a Syrup in the following Manner.

Boil the Roots cut into small Pieces, and the Tartar reduced to a gross Powder in nine Pints of chalybeate Water; then add, whilst the Water is still boiling, the Barks and Seeds bruised, then the Herbs cut down, and last of all the Flowers. When the Decoction is boiled in about a third Part, permit it to become half cool, then strain and express it; add six Pounds of the best Sugar, clarify the Mixture with the white of an Egg, and boil it to the Consistence of a Syrup, which, when cold, is to be rendered of an aromatic Flavour, with an *Elæosaccharum* prepared of the Oils of Cinnamon and Cloves, each three Drops, and a sufficient Quantity of the Powder of Sugar-candy.

This Syrup purifies the Blood, resists the Malignity of the Humours, provokes Urine, excites the Menfes, and is of excellent Service in the Scurvy, malignant Fevers, and other Disorders, where it is necessary to accelerate the Circulation of the Humours.

Its Dose is from half an Ounce to an Ounce and a half.

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### SYRUPUS LIENTERICUS ANT. DAQUIN.

*Anthony Daquin's Syrup against the Lientery.*

Take of the Tops of the greater Wormwood, and red Rose Leaves exungulated, each three Handfuls; of the Filings of Steel inclos'd in a Bag, two Ounces; of the best Rhubarb and Bark of Citrin Myrobalans, each an Ounce and an half; of the Powder of white Tartar one Dram, and bruised red Sanders, half a Dram; make into a Syrup in the following Manner.

Put all the Ingredients into a glazed earthen Vessel; pour upon them of the Juices of Plantain and red Roses, each two Pints; cover the Vessel, set it on warm Ashes for twenty four Hours, then boil the Infusion gently for a Quarter of an Hour; strain and express it, add four Pounds of Sugar, clarify with the white of an Egg, and boil to the Consistence of a Syrup.

This Syrup stops Fluxes, and especially Lienteries, corroborates the Stomach and the other Viscera, corrects the Acrimony of the Humours, and is good against Hemorrhagies.

Its Dose is from half an Ounce to an Ounce and an half.

As the primary Cause of a Lientery consists in a Weakness and Relaxation of the Fibres of the Stomach, so that it is not sufficient for concocting the Aliments, so the Ingredients of this Syrup are very proper, since after having gently evacuated the Humour producing such a Relaxation, they brace up and corroborate the Fibres of the Stomach.

### SYRUPUS MAGISTRALIS ASTRINGENS, seu DYSENTERICUS.

*The astringent or antidyenteric magistral Syrup.*

Take of the best Rhubarb one Ounce, of Citrine Myrobalans, half an Ounce; of Pomegranate Peel and red Rose Leaves, each three Drams; make into a Syrup in the following Manner.

Cut the Rhubarb into small Pieces, bruise the Myrobalans and Pomegranate Peel. Let the whole infuse together warm for twenty four Hours, in three Pints of distilled Plantain Water. Then boil the Infusion, gently strain and express it. Mix with it four Ounces of the clarified Juice of Barberries, and two Pounds of white Sugar. Clarify the Mixture with the White of an Egg; strain it, and boil to the Consistence of a Syrup.

This Syrup was some time ago look'd on as a great Secret, but is now inserted in several Dispensatories, and esteem'd one of the best of all the Syrups: For it gently evacuates bilious Humours by Stool, corroborates the Intestines, stops Dysenteries and other Fluxes, and strengthens the Stomach.

The Dose is from one to three Ounces. Three Spoonfuls, or an Ounce and a half, are generally taken in the Morning fasting for eight or nine Mornings.

### SYRUPUS MORORUM SIMPLEX.

*Simple Syrup of Mulberries.*

Take of the Juice of Garden Mulberries, and of white Sugar, each two Pounds. Make into a Syrup in the following Manner. Bruise the Mulberries in a Marble Mortar, let them digest cold for seven or eight Hours; then express the Juice through a Linen Cloth, and mix it with an equal Weight of fine Sugar; after which boil to the Consistence of a Syrup. This Preparation is in the Shops called *Diamorum cum Saccharo*.

It is good for Disorders of the Mouth and Throat, and an excellent Ingredient in Gargarisms. A Spoonful of it is sometimes taken with Success against Colds.

### SYRUPUS MORORUM COMPOSITUS.

*Compound Syrup of Mulberries.*

Take of the Juice of Garden Mulberries, and of white Sugar, each two Pounds; of the Juice of unripe Grapes, six Drams; of Myrrh and Saffron, each two Drams: Make into a Syrup in the following Manner. Boil the Juice of the Mulberries, the Juice of unripe Grapes, and the Sugar together. When the Syrup is half boil'd, put into it a small Bag with the Myrrh bruised, and the Saffron. Boil to a due Consistence, and when the Syrup



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rup is cold, pour it into a Vessel, permitting the Bag still to remain in it.

This Syrup is good against the Quinsy, cures Ulcers of the Palate and Throat, is of a very deterfive Nature, and an excellent Ingredient in Gargarisms.

The Mulberries should not be entirely ripe, because they are then of a more deterfive Quality, than when arrived at perfect Maturity.

### SYRUPUS PANCHYMAGOGUSSIVE CATHOLICUS VERNUS MEYSS.

*The universal de-obstruent Syrup.*

Take of the Roots of Asparagus, and recent Polipody, each two Ounces; of the Leaves of Mallows, Mercury, Monks Rhubarb, and Fumitory, each three Handfuls; of the Leaves of Lettices and Succory, each three Handfuls; of Buglofs and Borrage, each an Handful and an half; of Sorrel and Mint, of the Tops of Fennel, Thyme, and Hyssop, each one Handful; of the Tops of Rosemary, half an Handful; of the Leaves of Marigold, three Pugils; of pale Roses, thirty; and of the Leaves of Broom and Elder, each fifteen Pugils. Make into a Syrup in the following Manner. Cut and bruise all the Ingredients, put them into a glazed earthen Vessel, and pour upon them of the depurated Juices of Mercury, Fumitory, Pale Roses, and Succory, a sufficient Quantity. Boil to the Consumption of the half over a gentle Fire; so that after Expression, two Pints may remain; to which add two Pounds of Hony, then clarify the Mixture, and boil to the Consistence of a Syrup.

This Syrup is highly efficacious in removing all Obstructions, and purges effectually without producing Gripes. The Dose is from two to four Ounces.

### SYRUPUS PLANTAGINIS.

*Syrup of Plantain.*

Take of recent Plantain Roots, four Ounces; of Plantain Seeds, one Ounce. Bruise and boil in two Pints of distilled Plantain Water, to the Consumption of about a third Part; and with the expressed Liquor, mix of the Juice of Plantain two Pounds; and of white Sugar, two Pounds and a half: Clarify the Mixture with the White of an Egg, and boil to the Consistence of a Syrup.

This Syrup is proper to stop Fluxes, Hæmorrhages, and Gonorrhæas. The Dose is from half an Ounce to two Ounces.

This Syrup includes the Qualities of all the Parts of the Plantain, and is consequently the best that can possibly be prepared.

### SYRUPUS RESUMPTIVUS, SIVE DE TESTUDINIBUS, MESUES.

*Mesues Restorative Syrup.*

Take of the Flesh of Wood Tortoises, one Pound, of River Crabs, eight Ounces; of clean Barley, Pulp of Dates, and Damascus Raisins, each two Ounces; of Jujubes and Sebestens, each twelve; of bruised Liquorice Root, one Ounce; of the Kernels of Pine and Pistachio Nuts, of the Flowers of Violets and Water Lilly, of the Seeds of the Cotton Bush, Melons, Cucumbers and Citrulls, each half an Ounce; of the Seeds of Lettuce and white Poppy, each two Drams. Boil in a sufficient Quantity of common Water, strain and express. To the strained Liquor add three Pounds of Sugar. Clarify with the White of an Egg, and boil to the Consistence of a Syrup, which, when cold, is to be render'd of an aromatic Flavour, by an Eleosaccharum, prepared of

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fix Drops of the distilled Oil of Anise, and about an Ounce of powder'd Sugar.

This celebrated Syrup is called Restorative, because it surprisingly recruits Persons wasted and extenuated by chronic Distempers. It is good against a Phthisis, is of a moistening Nature, and corrects the Acrimony of the Humours.

The Dose is from half an Ounce to an Ounce and an half.

This Syrup cannot be long preserved, on account of the Juices of the Flesh, which are soon corrupted, tho' boiled with Sugar; for which Reason it ought not to be prepared, till it is to be used.

### SYRUPUS ROBORANS.

*The corroborating Syrup.*

Take of the best Rhubarb cut small, four Ounces; of bruised Myrtle Berries, and the exungulated Leaves of red Roses, each three Ounces; and of the Powder of white Tartar, one Dram.

Infuse all warm for twenty-four Hours in six Pints of Chalybeate Water. Then boil gently, strain and express the Decoction; add four Pounds of Sugar; clarify the Mixture with the White of an Egg; and boil to the Consistence of a Syrup.

This Preparation corroborates the Stomach and the other Viscera, stops Fluxes and Hemorrhages.

The Dose is from half an Ounce to two Ounces. See CLARIFICATION.

SYRINCHIUM. See SISZYRINCHIUM.

SYSSARCOSIS, συσάρκωσις, from σύν, and σὰρξ, Flesh, is a Species of Articulation of the Bones by the Intervention of the Flesh; or, as *Monro* expresses it, when Muscles are stretched from one Bone to another. *Syffarcesis* is, also, a Method of curing Wounds, particularly those of the Head, where the Cranium is laid bare, and the Interstice between the Lips of the Wound too wide for a Contraction, by promoting a Growth of new Flesh, which they call a Granulation. *Paulus, Lib. 6. Cap. 63.* uses the Word to express a preternatural Generation of Flesh about the Vessels and Coats of the Testes, whence proceeds a *Sarcocoele*.

SYSTASIS, σύσασις, of συνίστημι, to consist, Consistence. See CONSISTENTIA. In *Hippocrates* it signifies a Collection or Concretion. Thus, *Coac. 238.* σύσασις ὑγρῶ περὶ τὴν ὑπερώην, “a Collection of Humor about the Palate.” It is also used by the same Author, to express a kind of Contraction of the Body, occasioned by some uneasy Sensation, as in *Lib. de Morb. Sacr.* ἢ τις πόνος ἢ σύσασις γίνηται τῷ ἀνθρώπῳ, “if the Patient be affected with some Pain, or a *Syffasis*, (a dolorific Contraction.)”

SYSTATHMOS, σύσταμος, from σύν and σταθμός, a Weight, is expounded in *Galen's Exegesis* by ἰσοσταθμός, equiponderous.

SYSTEMA, σύστημα, from συνίστημι, to consist, in 7 *Epid.* signifies the concrete Matter, or Sediment at the Bottom of the Urinal; tho' *Galen*, for σύσασις, reads σύναγμα, (*Synagma*) as we find in his Comment on 6 *Epid. Sect. 3. Aph. 11.*

SYSTOLE, συστολή, from συτίλλω, to contract, a Contraction or Constriction; in Anatomy it is the Motion of the Heart and Arteries by Contraction, which is alternate and contrary to the *Diastole*. See COR.

SYSTREMA, συστρίμμα ἢ ἐυστρίμμα, from συστρίφομαι, to be collected, hardened, condensed, or concreted; in *Hippocrates* signifies a Collection of Humors, hardened Concretions, Tubercles, and Tumors. Thus in the following Passage, 2 *Proorrh.* ἐυστρίμματι σκίπλισθαι μὴ ἥπου ἐν τῷ ἰσχίῳ, “you are to examine whether there be any Concretions of Matter in the Ischium.” ἐυστρίματα signifies the same as συστρίφαι, (*Systrophæ*) which *Galen* expounds by φυμαλίαι ἢ σκληρίαι, “Tubercles and Hardnesses,” or hard Collections and Concretions of Humors, by *Celsus* called *Humoris Coitus*. And to give but one more Instance, 7 *Epid.* we read κατὰ σπλῆνα ἐυστρίμμα ἀνιδνόν, “near the Spleen was an indolent Hardness.”

SYSTROPHE, συστροφή, is of the same Original and Signification with the preceding Word; which see.



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For the Signification of this Letter in the Chymical Alphabet. See ALPHABETUM CHYMICUM.

TABACUM. Tobacco. See NICOTIANA.

TABASIR. The Arabic Word for Spodium.

TABANUS, TABE, or ASILUS. The Gad-fly. This is a kind of an oblong, slender blackish Fly, with a Trunk of the Figure of a small Hunting-horn, and sharp-pointed, with which it pricks or stings Asses, Horses, and other Beasts, in order to extract their Blood, with which it is nourished; it has six black Feet, and flies about Roads, Forests, and Woods. There is another Species of greenish *Tabanus*, which is called *Tabanides*.

These kinds of Flies are resolute, and proper to make the Hair grow, being bruised, or pulveriz'd, and applied to the Head. *Lemery des Drogues*.

TABARZET. An Epithet for double-refin'd Sugar.

TABELLA. A Lozenge.

TABERNÆMONTANA. The Characters are;

It hath a tubulous Flower, consisting of one Leaf, which is spread open toward the Top, and divided into several Parts; from the Bottom of the Flower arises the Pointal, which afterwards becomes the Fruit, composed of two Capsules, which open lengthways, and are filled with oblong Seeds, surrounded with a thin Pulp.

*Miller* mentions two Species;

1. *Tabernæmontana lactescens, citrii foliis undulatis*. *Plum. Nov. Gen.* Milky *Tabernæmontana*, with a waved Citron-leaf.

2. *Tabernæmontana lactescens, Lauri folio, flore albo, siliquis rotundioribus*. *Houft.* Milky *Tabernæmontana*, with a Bay-leaf, a white Flower, and rounder Pods.

The first of these Sorts is common in the Island of *Jamaica*, and in several other Places in the warm Parts of *America*, where it rises to the Height of fifteen or sixteen Feet, having a smooth strait Trunk, covered with a whitish Bark; at the Top of the Trunk come out the Branches, which are irregular, and beset with shining green Leaves; from the Foot-stalks of these Leaves are produced the Flowers, which are yellow, and extremely sweet-scented; these Flowers are succeeded by two forked Pods, in which the Seeds are contained. This Genus of Plants is nearly related to the Nerium or Oleander, and has been, by some botanical Writers, ranged under that Head; but the Seeds of this Genus have no Down adhering to them, as have those of the Oleander, being included in a soft, pulpy Substance. *Father Plumier* has constituted this Genus, in Honour of Dr. *James Theodore*, who was called *Tabernæmontanus*, from a Village in *Germany*, where he was born. He was one of the most knowing Botanists of his Age, and published, at *Frankfort*, a Folio in a long Form, in the Year 1590, in which are the Figures of two thousand two hundred and fifty Plants.

The second Sort was discovered at *La Vera Cruz*, by the late Dr. *William Houffoun*, who sent the Seeds into *England*, from whence several of the Plants have been raised. *Miller's Dictionary*.

## TABS DORSALIS.

*Hippocrates*, in *Lib. 2. de Morbis*, mentions this Disorder in the following manner. "The *Tabes Dorsalis* arises from a Disorder of the Spinal Marrow, and is principally incident to Persons of a salacious Disposition, or such as are newly married. The Patients are free from a Fever, eat and digest well. The Person, labouring under this Disorder, when interrogated with respect to his State, affirms, that he perceives, as it were, Ants falling from the superior Parts of his Body, his Head, for Instance, into the Spine of the Back; and, when he discharges his Urine or Excrements, there is, at the same time, a copious Evacuation of liquid Semen, in consequence of which he is incapable of propagating his Species, answering the Purposes of Marriage, or being amus'd with Venereal Dreams; he is generally short-breath'd, and weak; especially after running, or walking up a steep Place; he perceives a Sense of Weight in his Head, and is afflicted with a ringing of his Ears. The Patient is, in Process of Time, seiz'd with various Species of violent Fevers, and at last dies of that kind of Fever call'd *Lipypria*."

According to *Salus Diversus*, *Hippocrates* constitutes four different Kinds of *Tabes Dorsalis*: The first of which proceeds from excessive Venery, the second from a too copious Influx of the Blood into the Spinal Marrow; the third from a Driness of the Spinal Marrow; and the fourth from a Defluxion of peccant Humours upon it.

As for the first Species; in *Lib. 6. Epidem. Sect. 8. Text. 52.* we have an Instance of it, in the Case of *Grypalopax*, a Man

of twenty-five Years of Age; who not only discharg'd his Semen during Sleep, but, also, frequently in the Day-time; but, when this Patient was in the thirtieth Year of his Age, he died of a Consumption.

*Hippocrates*, as is obvious from his Books *de Aere, Aquis, & Locis*, & *de Genitura & Natura Pueri*, asserts that the Cause of this Disorder is, that the Semen is convey'd from the Brain, through the Spinal Marrow, to the Genitals. But, without any Dispute with respect to the Justness of this Doctrine, we can from Experience affirm, that the whole Body is wasted, and the Brain, together with the Spinal Marrow, which is only, as it were, an Elongation of it, considerably injur'd by an excessive Discharge of the Semen. Hence the Patient is render'd so weak, that a Difficulty of breathing is produc'd by any violent Exercise, such as running or walking up a steep Place. Tho', in the Beginning, this Disorder is not accompanied with a Fever, yet in Process of Time, when the vital Powers are weaken'd, a putrid Fever is brought on, which is generally of the malignant Kind, and in which the internal Parts are burnt with Heat, whilst the external Parts are excessively cold. In this Case, after the Use of universal Remedies, *Hippocrates* orders Asses Milk, and then that of Cows, for forty Days; after which he feeds the Patient with soft Aliments.

The second Species of *Tabes Dorsalis* is, when the Heat of the Spinal Marrow is impair'd, and almost extinguish'd, by a superfluous Quantity of Blood.

The third Species of *Tabes Dorsalis* is, when the Spinal Marrow becomes dry, in consequence of an Obstruction of the Vessels, thro' which the Nourishment is convey'd to it.

The fourth Species of *Tabes Dorsalis* is, when there is a Defluxion of peccant Humours upon the Spinal Marrow; an Instance of which is found in *Gulielmus Fabricius, Cent. 1. Obs. 45.*

*Baldwinus Rossius* in *Tract. de Scorbut. Epist. 4.* speaks of the *Tabes Dorsalis* in the following manner. "The Disease which the Greeks call *ἀρρωστος*, and the Latins *Lumbago*, is familiar, and almost epidemical, to the *Hollanders*, both on account of their Aliments, and the moist and cloudy Nature of their Country; tho', in other Parts, it, also, seizes those who use immoderate Venery; for, as we are inform'd by *Hippocrates* in *Lib. 2. de Morb.* it is principally incident to married Persons, and those addicted to Venery: Whilst a large Quantity of liquid Semen is discharg'd, the Conception does not remain in the Uterus of Women, and in Men there is a copious Discharge of Semen during Sleep, whether they lie with their Wives, or not. But, in my Opinion, this Species of *Tabes Dorsalis* is not much to be dreaded, since 'tis probable, that the Disorder draws its Origin from a pituitous Matter, or Flatulencies, or a melancholic Humour, mixed with the Blood, and falling from the Head, thro' the Vessels, by way of Catarrh, upon the Spinal Marrow. For since, according to *Hippocrates*, in his Book *de Glandulis*, there are seven Kinds of Defluxions, by means of which the Brain generally frees itself from what is offensive to it, that is, by the Nostrils, the Ears, the Eyes, the Palate, and the others, thro' the Vessels, into the Spinal Marrow and Blood, 'tis necessary, the Part in which the Defluxion is, should be variously affected, according to the Quantity and Quality of the peccant Matter; for, if the excrementitious Sordes, falling from the Brain to any other Part, are but small in Quantity, and not absolutely malignant, the Disorder, and its concomitant Pain may be easily surmounted and discuss'd by Nature; but if the excrementitious Matter is peccant both in Quantity and Quality, it lays a Foundation for very terrible Symptoms. But because, omitting six Species of these Defluxions, we only treat of that which comes from the Head, thro' the Vessels, to the Spinal Marrow, 'tis to be observ'd, that where there is a Defluxion of cold and tough Humours upon the Spine, these Humours first seize and affect the adjacent Parts, which, unless they are strong enough to subdue and dissipate the received Matter, forthwith transmit it to the subjacent, and especially the most contiguous Parts; and, as this Matter distends the whole nervous System, so it affects the whole Body with violent Pains, beginning at the Scapulae, and gradually proceeding to the Loins, and sometimes to the Os Coccydialis. The Patient afflicted with this Disorder, which is properly the *ἀρρωστος* of the Greeks, and the *Lumbago* of the Latins, can hardly walk or move from one Place to another. But if, with the Moderns, we rather chuse to call it *Gutta*, because the Humours drop, as it were, from the Brain, we are more in the right, than those who apply the word *Gutta* to



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" all Disorders of the Joints. The *Tabes Dorsalis* has this Circumstance in common with a Quartan Fever, that it seizes at all Seasons of the Year, tho' 'tis shorter in the Summer, longer in the Autumn, and longest of all in Winter. If an acrid and tenacious Humour falls with an Impetus from the Brain, it produces a Defluxion, not only on the Spinal Marrow, but also, on the Acetabula of the Os Coccendicis, and at last a *Tabes Dorsalis*, or a *Tabes Ossis Sacri*, as *Hippocrates* calls it, a Disorder, in which Death proves the only Blessing; because the Pain is continually more and more increased; for, as *Hippocrates*, in *Lib. de Glandulis*, informs us, this Disorder arises from a Defluxion from the Head, thro' the Vessels, upon the Spinal Marrow; after which it affects the Os Sacrum, to which the Marrow itself promotes a Defluxion, which is deposited on the Acetabula or Juncures of the Hips; and, if it produces a *Tabes*, the Patient is wasted and reduc'd to a State so miserable, that he is no longer fond of Life; for the Scapulae, and both Legs, become painful; and the Patient dies at last, after long, but fruitless Attempts for a Cure. Such Patients have, also, this in common with other consumptive Persons, that the Autumn is generally most fatal to them, whereas the Spring is the most commodious Season for taking Medicines: Besides, the Driness and Exienuation of the Spinal Marrow is owing to an Obstruction of the Vessels, which convey the Blood and Spirits from the Brain to the Spinal Marrow; for which Reason the Method of Cure consists in opening the Obstructions of the Vessels, and evacuating the peccant Matter. But, if the Patient is plethoric, the Humeral Vein of the Right Arm, or the Median Vein of the Left, or, if Necessity requires, the *Saphena*, is to be previously open'd; and, if the hæmorrhoidal Veins are tumid, 'tis expedient to open them, either by the Application of Leeches, or in any other manner; for, as we have before observed, the Cause of a Lumbago is generally a melancholic Humour, which, tho' apparently thicker, than that it should seem to be commodiously transmitted to the Spine, yet certainly is so, since we daily observe, that Persons labouring under Disorders of the Spleen easily fall into a Lumbago: And *Galen*, in *Comment. 3. in Lib. 1. Prorrhetic. Hippocrat.* confirms this Doctrine, whilst he says, that in Pains of the Loins we are to expect an Evacuation from the hæmorrhoidal Veins, because such Pains are frequently produc'd by a Retention of the Hæmorrhoids; especially in Persons of melancholic Constitutions, or when the Remains of the Disease convey'd to these Veins cannot be discharg'd.

" After Venesection, such Decoctions as render the peccant Matter fluid, are to be us'd, and then Purgatives according to the peccant Matter; beginning with such as are mild, and always remembering, that the Head is a Part primarily affected. Then, if Necessity requires it, we are to use stronger Purgatives; for which Purpose *Hippocrates* greatly recommends his Elixerium. But I should rather approve of small Pills of Agaric, macerated in a due Quantity of Turpeth, and exhibited in a Decoction of Sena-leaves, with the Addition of a few Fennel-seeds, or in any other Decoction, as the Condition of the Patient shall require: After Purging 'tis expedient to use Fomentations, Frictions, and Unctions, both in order to eliminate the peccant Matter, mitigate the Pain, and corroborate the Parts affected. For the same Purpose, if Time, Place, and the Custom of the Patient, admit, Baths of sweet Water are to be used; or artificial Baths prepared of Vervain, Roses, Sage, Fennel-herb-frankincense, Chamomile, and Melilot. If the Patient's Body is not sufficiently soluble, *Hippocrates* orders that Effect to be produc'd by a Clyster; but when the Humour is viscid, deep-impacted, or of a stautent Quality, we are not only to use these Measures, but, also, apply Cupping-glasses, in order to attract the Matter; carefully observing that the Matter be not too copious to be evacuated by their means; for otherwise there is Danger of supplying a new Fomes to the Disease: An inciding, attenuating, and not absolutely weak Diet is to be us'd. This Disorder, like others of the articular Kind, is protracted till the twentieth, generally the fortieth Year, and sometimes beyond that Period. Let the Drink be small Wine, or Ale well boil'd. The Sleep ought to be temperate, and sufficient for the Concoction of the Aliments; for too much Sleep renders the Brain subject to Catarrhs. The Exercise ought to be moderate, and proportion'd to the Strength; but never so violent, as to create Fatigue." *Sennert. Vol 2.*

" This is a violent Disorder, little treated of by Physicians, tho' fully describ'd by *Hippocrates*, and frequently observ'd by me in the Course of my Practice. The Head of the Patient is afflicted with a violent and acute Pain, after which, in some Patients, as it were, Ants seem to descend from the superior Parts. The Neck and Loins, together with their Muscles, and the Articulations of the Legs, are so painful, that they cannot sometimes be bended. The Patient is coltise, and the Urine with Duskulity discharg'd. But when he either goes to Stool,

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or discharges his Urine, a large Quantity of liquid Semen is evacuated; which, also, happens during Sleep, whether the Person lies with a Woman, or not. In Women the Conception, is not retain'd in the Uterus; by hard walking, especially up steep Places, the Body is greatly weaken'd, the Breathing becomes difficult, the Head is afflicted with a Sense of Weight, and a Ringing of the Ears is produc'd. The Patient labouring under a *Tabes Dorsalis* is free from a Fever; and, tho' he is not afflicted with the Loathing of his Food, yet he reaps no Advantage from it; but is totally consum'd. In the Beginning of the Disease, the Patient is pretty quiet and easy; but, as the Disorder proceeds, all the Symptoms are increas'd, the Legs swell, as in dropical Cases; in time, Ulcers arise on the Loins, some of which are heal'd, whilst others rise in their stead. At last, a violent Cataract arising, the Patient is render'd totally blind. This Disorder is principally incident on unmarried Persons, and those who indulge themselves in excessive Venery. A *Tabes Dorsalis* has, also, by some been observ'd to intermit, and again to recur. This is observ'd to have happen'd to many Persons, by a Physician, whose own Fate I knew it to be, and who was render'd blind by the Disorder, after an Intermission for seven Years. *Lommius Medicinal. Observat.* See GONORRHOEA and FLUOR ALBUS.

### OF A CONSUMPTION, FROM A GONORRHOEA, AND FLUOR ALBUS.

" This Consumption seems to have been known, even to the Antients, under the Name of a *Tabes Dorsalis*, when it proceeds from a Gonorrhœa. *Galen*, also, gives the History of the Wife of *Boethius*, a certain Nobleman of *Rome*, who fell into a consumptive Dropy, from the empirical Suppression of a Fluor Albus, that had flow'd in too great a Quantity, and a long time.

" It is very true indeed, that a Gonorrhœa, and a Fluor Albus, that are of an ill Nature, and Venereal, (when the Impurity proceeding from that Venom has once infected the Humours) often terminate in a Consumption of the Lungs, unless they are perfectly and timely cured. I affirm, from a long Experience and Observation, that a Consumption often arises from a simple or benign Gonorrhœa, and Fluor Albus; and, therefore, this Sort, arising from the continual Subtraction of the nutritious Juice by the Seminal Glands, must be reckon'd under the Head of an ordinary Consumption: For in a Gonorrhœa, and Fluor Albus, sometimes the Flux is so extraordinary, and continues so long, that the Mass is thereby plainly despirited, and render'd unfit for Nourishment: Whereupon the Blood, being loaded with heterogeneous and disagreeable Particles, grows hot; and at length an hectic Disposition is, by degree, brought upon the solid Parts, and the Habit of the Body; which is the same Sort of Consumption, that we are now treating of.

" The Symptoms which preface this Consumption, I have, for the most part, observ'd to be these: An hypochondriacal Oppression, Melancholy, and too much Thoughtfulness, with a Decay of Strength, and Loss of Appetite, in Men that are affected with a plentiful *Gonorrhœa*: But in Women, that have been long afflicted with a Fluor Albus, flowing in a great Quantity, a soft and bloated Habit of the Body, a squalid and pale Countenance, together with hysterical Fits, a remarkable Weariness, and Decay of Strength; all which Symptoms proceed from the same Cause, as from the poor despirited Nature of the Blood, caused by a want of new Chyle, whereby not only the Spirits are weakened and oppress'd, but, also, the Habit of the Body is render'd œdematous from the waterish Disposition of the Blood, as it is full of old and despirited Chyle. And, therefore, the Signs which preface this Consumption, are, hypochondriacal Oppressions, hysterical Affections, a Decay and Want of Strength, a bloated Habit of the Body, and a Want of Appetite: Which Symptoms, in Progress of Time, that is, when the Distemper comes to be confirm'd, are followed, also, by some others, as a Thirst, an hectic Disposition, Atrophy, and Wasting of the Flesh, till, at length, the Body is brought to the highest Degree of a Consumption; and that, very often, without any Cough, or any other remarkable Sign of a Consumption of the Lungs.

" This Distemper is easily cured, if the antecedent Cause of it can be removed, that is, if the Gonorrhœa and Fluor Albus can be cured. But, when it comes once to be confirm'd, it is evidently incurable.

" If a Physician be sent for in time, he ought to do all he can, by all proper Means, and a convenient Method, to stop the Gonorrhœa, or Fluor Albus, which are the Cause of this Consumption. This Efflux of the nutritious Juice being once stop'd by Art, we must endeavour, with all our Power, to replenish the despirited and impoverished Blood, as soon as may be, with new, oily, and benign Chyle; and, therefore, such Food as is delicious, and affords a good Juice, and is most grateful to a Patient's Palate and Stomach, must be given often in a Day, though in a little Quantity at a time. And, that this Appetite may be the more excited, let him be advis'd to be cheerful: For there is nothing that destroys the Appetite, and confirms a Consumption, more



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more than Grief and Sadness. Let him, also, enjoy the Advantage of an open and benign Air, which is very beneficial to the Nerves, and, consequently, to the Appetite and Stomach: Let him, also, use Exercise every Day, and rubbing of his Body, even to the procuring of moderate Sweats, (if his Strength will bear it) that the Load of old, despirited, and unprofitable Chyle, with which the Blood-vessels, and Habit of the Body, are stuf, may be sweated out, to make more room for new and useful Chyle, and, consequently, for the Improvement of the Appetite in the Stomach: But he must religiously abstain from the liberal Use of Wine, and spirituous Liquors, which are subject to put the Blood, which is before become too hot, into a greater Flame. Let the Physician, also, take heed he does not prescribe any Purges, or any Medicine whatsoever, to procure any other considerable Evacuation, which may create farther Expences to Nature, when she is already weak: But if an hecical Heat, even in the least Degree, be kindled in the solid Parts, he must presently endeavour, with all his Industry, to quench this Flame by the Use of Asses Milk, a Milk Diet, and of such mineral Waters as are chalybeate. *Morton's Phthisiologia, Cap. 4.*

TABULA. A Lozenge.

TABULATUM. The same as TABULA.

TABUM. Gore; a thin, lanious, and putrid Humour, flowing from malignant Ulcers, or mortify'd Parts, when the vital Powers are insufficient to form good Pus, or Matter.

TACAMAHACA. Offic. C. B. P. 503. Park. Theat. 1608. Raii Hist. 2. 1846. *Tacamahaca Populo similis, fructu colore Pæoniæ simili.* J. B. 1. 346. *Tacamahaca foliis crenatis, Sadelbouts Lignum ad ephippia conficiendum aptum.* Parad. Bat. Prod. 379. *Tecomahaca.* Hern. 55. TACAMAHAC-TREE.

*Tacamahac* flows from a large Tree as big as a Poplar, bearing Leaves like those of a Rose-tree, crenated about the Edges, consisting of sometimes five on a Stalk; the Flowers are small, growing in Clusters, of a white Colour, which are followed by triangular Seed. It grows in the *Spanish West-Indies*; there are two Sorts of Gum, one in Lumps, which is dry and resinous, crumbling at first between the Teeth, but, when chewed awhile, sticking together, made up of little yellow-redish Grains, clinging together, of a pleasant strong Smell, somewhat like Mastic; the other Sort is called *Tacamahac* in the Shell, being of one Texture, smooth, and in Colour like strained Galbanum, but lighter, of a pleasant Smell like the former.

*Tacamahac* is heating and drying, dissolving and ripening, though it is seldom used inwardly; it is good for the Head and Nerves, and is sometimes applied to the Temples for the Head-ach; is frequently mixed with *Galbanum*, and is applied to the Navel in Disorders of the Womb. *Miller's Bot. Off.*

This is a resinous Substance, of which there are two Kinds, one in Shells, and one in Lumps. The first is most esteemed, and is sometimes named *Tacamahaca Sublimis*. It is of a very agreeable Smell, like that of Lavender and Angelica; and is brought from *Madagascar* and *New Spain*, being the Product of a Tree named *Tacamahaca Populo similis fructu and colore Pæoniæ*. J. B. *Tecomahaca.* *Hernand.* It is used externally in the same Intentions with the Gum Caranna, and likewise resolves Tumors, strengthens the Nerves, and cures the Head-ach, when applied in a Plaster to the Scalp. *Geoffroy.*

It is very much used by the *Indians*, in all sorts of Distempers, especially in Tumors of all kinds; for it is highly dissolvent, maturing, and discussing; it, also, removes all Pains from cold and flatulent Humors; thrown upon the Coals, or held to the Nostrils, it gives immediate Relief in Hysterics. A Plaster of it, applied to the Navel, retains the Uterus in its Place, as is known by common Experience; the more delicate sort mix it with Amber and Musk; spread upon Linen, and apply'd behind one or both Ears, or the Fumes of it attracted, it represses all manner of Desfluxions from the Head. Apply'd to the Temples by way of Cerate, it restrains all sorts of Rheums or Desfluxions upon the Eyes, or other Parts of the Face; and, put into an hollow putrid Tooth, it eases the Pain thereof.

A Plaster prepared of *Tacamahac*, with a third Part of *Styrax*, and a small Quantity of Amber, is an excellent Topic for the Stomach; for it strengthens that Part, provokes an Appetite, helps Concoction, and discusses Flatulencies; apply'd to the Head, it strengthens the Brain. It is of great Efficacy in the Sciatica, and all Diseases proceeding from cold or mix'd Humors. Being apply'd alone to Wounds of the Joints or Nerves, it cures them effectually; for it causes an immediate Suppuration, and prevents Spasms. I, says *Monardes*, mix it with a third Part of Wax, for the more convenient spreading. Thus far *Monardes*; to which we may add, that a Plaster of *Tacamahac*, apply'd to the Belly, is said to mitigate the Head-ach; it is, also, effectual in discussing Tumors and Hardnesses of the Spleen. *Raii Hist. Plant.*

TACEROS, *τακερος*, imports colliquated; or lean and thin, from too great a Colliquation. *Moschion.*

TACHY, TACHEOS, *ταχύ, ταχίως*. Besides its common Signification, importing Speed and Celerity, it is sometimes used

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instead of *πυκνός*, often, frequently, with quick Repetitions. Thus *Lib. de R. V. I. A. ἐπανάλησις ταχέαι* are frequently or quickly repeated Perfusions; where *Galen* on the Place says, that the Antients confounded the Use of those two Words *πυκνός* [*pycnos*] and *ταχύς* [*tachys*]; and that sometimes frequent Actions [*πυκνὰ ἐνέργειαι*] are called quick [*ταχέαι*] Actions.

TACTUS. The Touch, in Midwifry, is the Exploration of the State of the *Vagina*, and Uterus, and of the Situation of the Fœtus, and whatever else is contain'd therein. *Hippocrates*, in his Treatises concerning the Diseases of Women, has been very full and exact in his Directions upon this Subject. See OBSTETRICATION.

But *Tactus* is the Sense of Touch, in the common Acceptation of the Word. Now, in order to account for this, it must be observ'd, that soft, pulpos, medullary, nervous, and pyramidal Papillæ arise from hard subcutaneous Nerves, which, however, become soft, when stript of their exterior Membrane: Hence these Papillæ are highly sensible; they are, also, moisten'd by the perpetual Afflux of a very fine Liquor, and defended with a very slender, but solid Epidermis; and, that their Sensibility may be the better preserv'd, they lie conceal'd in Sinuses and Depressions under the Cuticula or Scarf-skin. In the Parts most immediately destined to the Purposes of Touch, such as the Tongue, the Points of the Fingers and Toes, they are contractile, and capable of being sent out again. These Papillæ are the corporeal Organ or Instrument, by the Mediation or Intervention of which, Objects handled are said to be *touch'd*.

'Tis remarkable, that tho', in the Surface of other Parts of the Body, these Papillæ are perpendicular, yet in the Fingers and Toes they run out longitudinally. Hence acquiring an Epidermis in these Parts, being wrapt up, as it were, in a Sheath, and depriv'd of Juice, they are condens'd into Nails, which are render'd thick by the Accession of the consolidated cutaneous Vessels, and are fit for defending the Papillæ, and preventing their Callosity.

The Sensation of Touch is, therefore, produc'd, when, applying the Point of the Finger to any Object, these Papillæ are, by the Determination of the Mind, emitted, and gently rub'd on its Surface; for by this means a certain Motion is impress'd on these Papillæ, the Effect of which, being convey'd to the Common Sensory, excites in the Mind the various Ideas of hot and cold, moist and dry, soft and hard, smooth and rough, as, also, of Figure, Motion, Rest, Distance, Titillation, Itching and Pain.

Hence we understand, why, when the Epidermis is remov'd, macerated, wash'd off, or burn'd, a Sense of Pain is excited by touching any Object: Why, when the Epidermis is thick, hard, callous, or spoil'd with a Cicatrix, the Sense of Touch is lost: What is the Cause of that disagreeable Motion excited by a Tremor, or by the Cramp-fish, and which gradually degenerates into a Stupor: Why the internal Surface of the Nails is affixed to the subjacent Skin, and at their Roots so intense a Pain is produc'd by the Application of any Object. Hence, also, we understand why the Sense of Touch is most intense and acute, where the Nails, and spiral Lines, or small Furrows, of the Epidermis are found. *Boerhaave Institut.*

TÆDÆ. See DAIS. Certain Pharmaceutical Compositions, intended for Suffumigations, or Pessaries, and made in the Shape of Torches, are, also, thus call'd.

TÆNIÆ. Flat-worms. See VERMES. Many sorts of flat Fish, of the Sole-kind, are also call'd TÆNIÆ.

TAGENITIS, *ταγνίτις*, or TEGANITIS, *τηγανίτις*. A kind of Pancake made of Oil and Wheat-meal only.

TAGERA. H. M. *Sena spuria Malabarica* is a Plant of the *East Indies*, growing in sandy Places to the Height of three or four Feet. The Root is fibrous, woody, and blackish; the Stalks round, woody, and green: The Leaves stand on short Pedicles in two Series, by Pairs, and are of a roundish, oblong and broad Figure, with a round Edge on the fore Part, and striated towards the Pedicle, smooth, and of a dull Green; and the Flowers, in Shape and Colour, resemble those of the *Sophora*.

The Leaves, bruised, cure the Stings of Bees, being rubbed on the Part affected. The Seeds, bruised, and mixed with Saffron, are effectual for Pustules and Ulcers; and, with the Juice of the Plant *Vetla-cattu*, heal a Paronychia. *Raii Hist. Plant.*

*Wellia* TAGERA. See WELLIA.

TAGETES, *African* or *French* Marigold.

The Characters are,

The Root is fibrous and annual; the Leaves resemble those of Tansey; are scid, and cut home to the Rib; the Calyx is monophyllous and tubulated. The Beards of the Flowers are plain or fistulous, and the Seed is angulated, and furnished with a foliated Head.

*Boerhaave* mentions ten sorts of *Tagetes*; which are,

1. *Tagetes, maximus; rectus, flore simplici, ex luteo pallido.* J. B. 3. 100. *Tanacetum, Africanum, majus, simplici flore, pallente.* C. B. P. 133. *Caryophylli Hispanici dicti, vel Caryophylli Mexicani Planta.* *Hernand.* 154. *Chrysanthemum Africanum, erectum, Tanacetii folio, flore simplici majore.* M. L. 3. 16.

2. *Tagetes;*



2. *Tagetes*; *maximus*; *rectus*; *flore maximo*, *multiplicato*. *J. B.* 3. 100. *Tanacetum*, *five flos Africanus*, *major*, *flore pleno*, *aureo*. *C. B. P.* 132. *Chrysanthemum*, *Africanum*, *erectum*, *Tanaceti folio*, *flore pleno majore*. *M. H.* 3. 16. *Caryophyllus*, *Mexicanus*, *primus*. *Col.* 2. 47. *Cempoal xochitl*, *vel Giuhua xochitl*. *Tzneycepohual*. *Caryophyllus Mexicanus*. *J. Hernand.* 154.

3. *Tagetes*; *Indicus*; *medius*; *flore simplici*, *luteo pallido*. *J. B.* 3. 99. *Oquichitli*, *Cocazochitl*, *Caryophyllus Mexicanus*, II. *Hernand.* 155.

4. *Tagetes*; *Indicus*; *medius*; *flore luteo*, *multiplicato*. *H. L.* 587. *Tlapalte*, *Cacayatl*, *Caryophyllus Mexicanus*, III. *Hernand.* 155.

5. *Tagetes*; *Indicus*; *minor*; *simplici flore*; *five Caryophyllus*, *Indicus*; *five flos Africanus*. See *AFRICANUS FLOS*.

6. *Tagetes*; *Indicus*; *minor*; *multiplicato flore*. *J. B.* 3. 99. *Macuil xochitl*, *feu Maon*, *Caryophyllus Mexicanus*, IV. *Hernand.* 155.

7. *Tagetes*; *Indicus*; *flore simplici*, *fistuloso*. *H. L.* 588. *Chrysanthemum Africanum*, *erectum Tanaceti folio*, *petalis florum fistulosis*, *flore simplici*. *M. H.* 3. 16. *Caryophyllus Mexicanus*, *flore fistuloso*, *simplex*. *Col.* 2. 46. *Tanacetum*, *five flos Mexicanus*, *flore fistuloso*, *simplici*. *C. B. P.* 133.

8. *Tagetes*; *Indicus*; *flore fistuloso*, *duplicato*. *H. L.* 583. *Caryophyllus Mexicanus*, *flore fistuloso*, *alter Polyanthos*. *Col.* 2. 46. *Tanacetum five flos Mexicanus*, *flore fistuloso pleno*. *C. B. P.* 133. *Chrysanthemum Africanum*, *erectum*, *folio Tanaceti*, *petalis florum fistulosis*, *flore pleno*. *M. H.* 3. 16.

9. *Tagetes*; *Indicus*; *flore aureo*, *simplici*, *minor*. *Caryophyllus*, *Indicus*, *flore aureo*, *simplici*, *minor*. *H. Æyst.* Æst. o. 14. *T. I. F.* 3.

10. *Tagetes*; *Indicus*; *minimus*; *flore sericeâ hirsutie obfita*. *H. L.* 587. *Tanacetum Africanum*, *minimum*, *sericea hirsutie obfita*. *C. B. P.* 133. *Tlapalcacatl*, *Coaxochitl*, *Caryophyllus Mexicanus*, V. *Hernand.* 156. *Caryophylli Hispani dicti varietas septima & octava*. *Col.* 2. 47. *Descr. Boerb. Ind. alt. Plant.* Vol. 1.

The *Tagetes* was first brought not out of *India*, but from *Catalonia*. The first eight Species are commended by some as very salutary Herbs, and are said to have an attenuating and aperitive Virtue. The expressed Juice of the Leaves, mixed with Wine, is recommended for a cold Stomach, and Obstructions of the Menfes, and for an intermittent Fever, a Cachexy and Dropsy; others, on the contrary, say, they are poisonous Plants. In *Mauritania* (*Barbary*) the *Tagetes* is a very good Plant against many Distempers; but *Boerhaave* often observes, the same Plant may be poisonous in one Country, and salutary in another. It is certain, however, that the ninth and tenth Species are mortal, if eaten; for, if Children happen only to hold the Flowers, which are, indeed, beautiful, in their Mouths, an Inflammation is excited therein, which, if communicated to the Stomach, proves mortal. For this Reason, tho' many things are said of the Virtues of the former Species, we suspend our Assent; and, indeed, there is so great a Copiousness and Variety in Botany, that we may very well be without the Use of this Plant, which *Dodonæus* asserts, and proves by a Multitude of Experiments, to be poisonous. *Hist. Plant. adscript. Boerhaav.*

TAL. The Dung of Peacocks; or *Alcali*. *Rulandus*.

TALAGAS. See *PALMA*.

TALC. Boil'd Wine. *Rulandus*.

TALCUM. *Offic. Boet.* 394. *Geoff. Prælect.* 67. *Schrod.* 357. *De Laet.* 128. *Aldrov.* 685. *Talcum*, *alias stella Terræ*. *Charl. Foss.* 24. *Worm* 57. *Talus fissilis*. *Calc. Mus.* 458. *Stella Terræ quibusdam*. *TALC.*

Talc is a shining, silile Stone, easily divisible into very thin pellucid Laminæ, a little flexible. In the Fire it does not melt, is not calcined, nor does it lose its Colour. Some Talc is of a Silver Colour, called by the Chymists *Argyrolithos*; some yellow, called solar Talc; some greenish, and some black. That which is brought from *Venice* is reputed the best, and is of a light-green Colour. This Stone is seldom used in Physic; but is very much in Vogue as a Cosmétique, the Ladies being of Opinion that it cleanses and whitens the Skin.

It is, first of all, prepared by being reduced to an impalpable Powder; which can be done no way so readily, as by heating it red-hot several times in the Fire, and as often quenching it in cold Water; for, by this means, it may easily be levigated on a Porphyry-stone, to any Degree of Fineness, the Powder being of a shining Silver Colour, and very smooth to the Touch. Of this Powder the Women make Ointments, or Pomatums, which they use as a Wash. Some Chymists have endeavoured, by the Oil of Talc, to fix Quicksilver, and afterwards convert it into Silver; but they never considered, that what they called Oil of Talc was entirely the Product of the other Substances mixed with it. *Geaffroy.*

TALENTUM. A Talent, the greatest Weight among the *Greeks*. See *PONDUS*. It was equal to sixty-six Pounds, eleven Ounces, seventeen Grains, and  $\frac{1}{2}$  Troy Weight.

TALIR KARA. *H. M.* *Arbor Indica*, *spinosa*, *flore & fructu vidua*.

This is a tall Tree, with a thick whitish Trunk, and a dusky Ash-colour'd smooth Bark, and furnished with a Multitude of small Branches, which extend themselves to a wide Compass, and are arm'd with oblong, hard, and rigid Spines. The Root is whitish, cover'd with a dusky Bark, of a strong Smell, and an astringent Taste. The Leaves are green above, and greenish underneath, of an oblong Round, acuminate, slightly crenated in the Edges, thick, dense, shining, of a strong Smell, and of a rough and astringent Taste; but the tender Leaves, which come forth from the Top, are, for the most part, of a purple-red Colour. The Tree was never observ'd to bear either Flowers or Fruit; it grows in *Malabar*, is an Evergreen, and lives a long time.

Of the Root, boiled in Water, they prepare a Drink, which potently evacuates acid and salt Humours by Diaphoresis; and, of the Leaves fry'd in Oil with green Turmeric, they prepare a Liniment, which is much commended for removing the Scabies.

TALPA. *Offic. Schrod.* 5. 308. *Mer. Pin.* 168. *Schw. Quad.* 128. *Aldrov. de Quad. digit.* 451. *Charlt. Exer.* 25. *Gesn. de Quad. Digit.* 931. *Jonsl. de Quad.* 118. *Raii Synop. A.* 236. THE MOLE.

It lies in Burrows under the Earth; and the Animal itself, the Heart, and the Blood, are used in Medicine. The Ashes of the burnt Mole is good for the Leprosy, strumous Swellings, and Fistulas. Taken inwardly in Beer or Wine, it cures the wandering Gout and Scrophula. The Heart cures an Hernia, and the recent Blood cures an Alopecia, being rubbed on the Part. *Dale* from *Schroder*.

TALPA is, also, a Species of Tumor affecting the Head, of the atheromatous Kind. It is, according to *Blancard*, call'd sometimes TALPARIA.

TALUS. The same as ASTRAGALUS. The Ankle-bone. *Dioscorides*, L. 2. C. 62. recommends this Bone in a Swine, calcin'd, powder'd, and taken internally, for Inflammations of the Colon, and chronic gripe Pains.

TAMANDUA. The Name of an *American* Beast, somewhat like a Fox; call'd, also, *Myrmecophagus*. The Fat is esteem'd resolvent and nervous.

TAMARATONGA. The same as CARAMBOLAS; which see.

TAMARINDI. *Tamarinds*.

The Characters are;

The Leaves are pinnated, without an odd Lobe at the End. The Flower is triperalous, furnished with three Stamina, and seated in a carnos Calyx, which runs out into four long small Leaves. The Ovary, arising from the Centre of the Calyx, becomes a long, broad Pod, divided into Cells, and full of an acid Pulp, containing oval Seeds.

*Boerhaave* mentions but one Sort of Tamarind; which is,

Tamarindi. *J. B.* 422. *Boerb. Ind. alt.* 2. 59. *Tamarindus*. *Offic. Ger. Emac.* 1607. *Park. Theat.* 217. *Raii Hist.* 2. 1748. *Tourn. Inst.* 660. *Tamarindus*, *Oxyphænicon*. *Mont. Exot.* *Tamarindi*; *Lusitanis Tamaræazecla*. *Marcg.* 107. *Tamarindus Derelside appellata*. *Alpin. Ægypt.* 2. 19. 170. *Il Tamarindo, ò Derelside de gli Egittii*. *Pon. Ital. Bald.* 23. *Siliqua Arabica, que Tamarindus*. *C. B. P.* 403. *Hijabila*, *Tamarindus*. *Herm. Mus. Zeyl.* 27. *Intra five Tamarindus*. *Pis.* (Ed. 1658.) 157. *Balam pulli five Maderam pulli*. *Hort. Mal.* 1. 39. *Tab.* 23. THE TAMARIND-TREE.

This grows to be a large Tree, whose Branches are clothed with many winged or pinnated Leaves, made of several opposite oval Pinnæ, with never a single one at the End. The Flowers grow on the young Shoots in Clusters, eight or ten together, each of seven Leaves, four yellow, and three white, in purple Veins, in form of Orange-flowers, having three crooked Stamina, or Horns. The Fruit is of a yellowish-brown Colour, of a flauish-round Shape, three or four Inches long, having two or three swelling Knots, or Prouherances, containing an acid Pulp, full of stringy Fibres, and hard flat Stones, or Seed, of a Chestnut-colour; and these are the Tamarinds of the Shops. This Tree grows both in the *East* and *West Indies*, and in *Egypt*. The Tamarinds brought from *East India* are darker and drier, but contain more Pulp, being preserved without Sugar, and fitter to be put into Medicines: Those from the *West Indies* are redder, and have less Pulp, and are preserved with Sugar, and so pleasanter to be eaten as they are.

They are cooling and opening, good to purge cholerick Humours, and correct the bilious Heat in the Stomach and Bowels; they allay Thirst, provoke Urine, and help the Jaundice. *Miller's Bot. Off.*

This is the blackish Pulp of a Pod, something like common Beans: The Pulp lies between two Husks, or Shells, one of which is woody, the other tough and membranous. The Tree which bears the Fruit grows in *Egypt*, and in both *Indies*; and is described by *Tournefort*, in the *Memoirs of the Royal Academy* for 1699. We owe the Knowledge of this Purgative to the *Arabians*; for neither *Greeks* nor *Romans* knew any thing of it. The Dose, in Substance, is from an Ounce to an Ounce and an half; and three or four Ounces in Decoction. Some Physicians order a Tamarind-whey, *Serum Lactis Tamarindinum*, as a gentle Purge,



Purge, in inflammatory Dispositions, Colics, &c. and Tamarinds are very properly mixed with Cassia: They may, likewise, be given as an Alterative, in the Quantity of half an Ounce; and they are very proper to be mixed with Ptisans, and other Liquors, given to quench Thirst in acute Distempers. *Geoffroy*.

Tamarinds correct the Acrimony of Humours; purge Bile, and allay its Heat, and that of the Blood; cure acute Fevers, and the Jaundice; extinguish Thirst, and all unnatural Heat of the Liver and Stomach; and restrain Vomiting.

The *Turks* and *Arabians*, as we are told by *Bellonius*, when about to undertake a long Journey, provide themselves with Tamarinds: The *Turks* make great Use of them, not in Medicine, but to allay their Thirst. The *Indian* Physicians, as we are informed by *Garcias* and *Acosta*, apply the Leaves to an Erythipelas.

The *Arabians* preserve the small and green Pods with Sugar, or the Honey they call *Carob*; and when they are larger, and grown mature, preserve their Pulp with Sugar, and carry it with them in their Journeys through the desert Places of *Africa*; and find it of extraordinary Use in quenching their Thirst, and refreshing them when inflamed, and almost spent with Heat, and the Journey, in evacuating great Quantities of hot Humours by Stool.

In pestilential Fevers, and all other putrid burning Fevers, they drink Water, in which great Plenty of Tamarinds have been infused with Sugar, finding it a most pleasant as well as refreshing Liquor, under their burning Heat, and intense Thirst. They frequently use Tamarinds, also, in a Gonorrhœa; and *Fallopian* commends them in a Gonorrhœa of a bilious Kind.

In a Redundance of Bile, a Fervor and Ebullition of the Blood, a preternatural Thirst, cutaneous Diseases, and particularly the Jaundice, the *Indians* prescribe a simple Medicine, composed of Cassia Fistula, with Tamarinds, and the Sugar commonly called *Jagra de Canna*, which Preparation gently works by Stool. The Fruit of the Tamarind is not brought to us entire, but bruised, that, being by this means well compacted, it might keep out the external Air. Tamarinds are preserved three Years in a Glass Vessel with a narrow Mouth, and well stopp'd, and deposited in a clean Place, which is pervious to the Air and Winds, unless some external Heat or Moisture corrupts it. *Raii Hist. Plant.*

The Tamarind, which the *Egyptians* call *Derelside*, is a Tree of the Bigness of a Plum-tree, and full of Branches; the Leaves much resemble those of the Myrtle called *Sesban*: It bears white Flowers, very like those of the Orange-tree, from the Midst of which proceed four white and very slender Threads, which become thick Pods; first green, but, when ripe, of an Ash-colour, and containing thick, uneven, and hard Seeds, involved in a black and acid Pulp.

The Tamarind-tree is not very plentiful in *Egypt*, which is not its native Soil; for it is brought thither from *Arabia* and *Ethiopia*, and kept in Green-houses. There grows a Tamarind-tree in the Desert of *St. Macharius*, near the Monastery of the *Affyrians*, in a Place where no other Plant lives, which is looked upon as a Miracle: This Plant is to be admired for one Property, which is, that its Leaves always follow the Sun, and are called *Sun-flowers*; for, when the Sun setteth, they all close up, and open again at Sun-rising; and this Motion of the Leaves is so remarkable, that while the Pods are on, the Leaves, at Sun-set, close in upon them, and embrace them very strictly; and, when the Sun rises, open, and discharge themselves from the Pods, till the Return of Sun-set. This Conversion of the Leaves is observed in several other Plants of *Egypt*, as in the *Acacia*, *Abrus*, *Ab-fus*, and *Sesban*.

The Leaves of the Tamarind-tree are used to kill Worms in Children, and an Infusion or Decoction of the same is a gentle Purge; the Leaves are acid, and not unpleasant to the Taste. *Prosper Alpinus, de Plant. Egypt. Vol. 2.*

The *Arabians*, who are the present Inhabitants of *Egypt*, call this Tree, together with its Pod, *Tamarbendi*, that is, the *Indian Fruit*, because it was brought out of *East-India* into *Arabia Felix*, or out of *Ethiopia*, as *Alpinus* rightly observes, into *Egypt*, and the bordering *Arabia*; for that *Ethiopia* had the Name of *India*, among the Antients, is undoubtedly certain, from *Servius* and others. This noble Plant, therefore, was not transported from *Arabia* to the *Indians*, as some have written; but from *India* to the *Arabians*. But they are wider from the Truth, who derive the Name from Dates: For *Tamar* not only signifies a Date, but, as it is known to those who are but little skilled in *Arabic*, all Fruit whatever, so as, in its largest Signification, to comprehend the Fœtus of Trees and Animals. They who call the Tamarind the *Arabian Pod*, are pretty bold Nomenclators, and are obliged to find Distinctions for so many other Pod-bearing Plants among the *Arabians*. The Fruit of the Tamarind-tree is shorter than the Pod of the *Acacia*, but thicker and broader; and, for the grateful Acidity of its Pulp, is of principal Estimation among gentle Cathartics, though it has but little Effect, if gather'd while too green, or left to hang till it be grown too dry. *Reslingii Observ. in Prosp. Alpin. de Plant. Egypt.*

Tamarinds are gently laxative, and are proper in febrile Heats, where not only Coolers, but Laxatives, are required: They are of Service in continual Fevers and Diarrhœas, strengthen the Stomach, and are commended in a Flux of the Hæmorrhoids, from a bilious and acrimonious Blood. The Leaves quench Thirst, and are useful in burning Fevers. *Hist. Plant. adscript. Boerhaave.*

#### TAMARISCUS.

The Characters are;

The Leaves are very thin, the Calyx small, the Flower small, rosaceous and pentapetalous; the Ovary is an oblong, membranaceous, bivalve Capsule, full of downy Seeds.

*Boerhaave* mentions two Sorts of Tamariscus; which are,

1. Tamariscus; Germanica. *Offic. Tourn. Inst. 66. Boerb. Ind. alt. 2. 257. Ger. 1194. Emac. 1378. Tamariscus folio latiore. Park. Theat. 1479. Raii Hist. 2. 1705. Tamarix fruticosa folio crassiore, sive Germanica. C. B. P. 485. Tamarix Germanica sive minor fruticosa. J. B. 1. 351. Tamarix minor, sive fruticosa. Chab. 75. GERMAN TAMARISK.*

It is cultivated in Gardens, flowers in *June*; and the Parts in Use, with their Virtues, are the same with those of the common Tamarisk.

2. Tamariscus; Narbonensis. *Ger. 1194. Emac. 1378. Tourn. Inst. 661. Boerb. Ind. alt. 2. 257. Tamariscus. Offic. Tamariscus folio tenuiore. Park. Theat. 1479. Tamarix altera folio tenuiore, sive Gallica. C. B. P. 485. Tamarix major sive Arborea Narbonensis. J. B. 1. 351. Raii Hist. 2. 1704. Myrica sive Tamarix. Chab. 75. TAMARISK.*

The Tamarisk never grows to be a Tree of any great Bigness in *England*, though beyond the Seas it will; having a rough dark-brown Bark. The younger Branches are of a Chestnut-colour, clothed with very fine tender green Leaves, somewhat like those of Cypress, but thinner and finer, and not at all hard or rough: The Flowers grow in round Spikes, at the Ends of the younger Shoots, an Inch or more in Length, several Spikes growing together, each consisting of a great many small, five-leaved, pale-red Flowers, which are succeeded by very small Seeds, included in a downy Substance. It is only planted in Gardens in *England*; its native Place being *Spain*, and the Southern Parts of *France*. The Wood, Bark, and Leaves, are used.

They are accounted specific for all Disorders of the Spleen, as being believed to lessen it much; and they used to drink out of Cups made of this Wood, to cure those Illnesses: And the Antients believed, that Swine, that fed out of a Trough made of this Wood, would have no Milt. The Bark is sometimes used for the Rickets in Children. *Miller's Bot. Off.*

It is cultivated in Gardens, flowers in *May* and *June*; and the Bark, Wood, Tops of the Branches, and the Flowers, are used.

Tamarisk is heating, drying, attenuant, aperitive, abstergent, subastringent, diuretic, and splenic. Its principal Use is in Obstructions and Tumors of the Spleen, and in Diseases proceeding from black Bile, and Serum; as the Itch, Itchings, black Jaundice, and the Fluor albus. Outwardly applied, it cures the Tinea of the Head.

The Tamarisk was first transplanted into *England*, by the Care of *Edmund Grindall*, Archbishop of *Canterbury*, who had experienced its Virtue in the Cure of an Hardness of the Spleen. *Camden, in the Life of Queen Elizabeth.*

TAMARIX. See TAMARISCUS.

TAMISON, τὰμίσον. The same as COAGULUM.

TAMNUS. See BRYONIA.

TAMOATA, by the *Portuguese* called *Soldido*, is an *American* fresh-water Fish, about a Foot and an half long, three Inches in Circumference, and of an obscure ferruginous Colour: It is esteemed good Food, and said to be of an aperient Nature, and proper for the Cure of a Gravel. *Lemery des Drogues.*

TAMOATARANA. The Name of a *Brazilian* bulbous Plant, the Bulb of which is eaten like Potatoes, and is said to have an agreeable Taste. *Raii Hist. Plant.*

#### TANACETUM.

The Characters are;

The Root is fibrous; the Leaves alternate, and divided into pinnated and crenated Segments. The larger Flowers are closely compacted into a thick Umbella, and the Calyx is squamous and hemispherical.

*Boerhaave* mentions six Sorts of Tanacetum; which are,

1. Tanacetum; vulgare; luteum; maximum.
2. Tanacetum; vulgare; luteum. *C. B. P. 132. Tourn. Inst. 461. Boerb. Ind. alt. 124. Tanacetum. Offic. Ger. 525. Emac. 650. Raii Hist. 1. 365. Synop. 93. Tanacetum vulgare. Park. 80. Parad. 482. Tanacetum vulgare flore luteo. J. B. 3. 131. TANSIE.*

The Root of Tansie is large, stringy, and full of Fibres, sending forth many pretty large, yellowish-green, winged Leaves, divided into several deeply serrated Segments, set opposite to one another, with one cut into three Parts at the End, of a pleasant grateful Scent. The Stalks arise to the Height of about two Feet, having several similar, but smaller, Leaves growing on them, and, on their Tops, pretty large Umbels of yellow naked Flowers,

[ B + ]



# T A N

Flowers, composed only of filular Thrums, without any Petala. It is found wild by Road-sides, and the Borders of Fields; and flowers in July.

The Leaves are used; being warming and aperitive, opening Obstructions of the Liver and Spleen, and helping the Jaundice: They likewise provoke Urine, and the Catamenia, though the good Women give a Syrup of the Juice to prevent Miscarriage. The Flowers are accounted good to destroy Worms in Children. *Miller's Bot. Off.*

This Plant is acrid, aromatic, bitter, and gives no Tincture of Red to blue Paper: The Roots are first insipid, afterwards astringent, but without Bitterness.

Tansie contains an aromatic, oily, volatile Salt, loaded with a great deal of Sulphur: For,

By the chymical Analysis, it yields a great deal of Oil, a pretty deal of Earth, a little urinous Spirit, and no volatile concrete Salt: Thus it is stomachic, febrifugous, sudorific, vulnerary, and aperitive. *Casalpinus* says, its Leaves, infused in Wine, provoke the Terms; and that two Drams of their Juice, drank with Plantain-water, cure intermitting Fevers. *Saxonia* used this Juice with Success for chapt Hands: It is highly esteemed for the Tethers and Scurf. For the Rheumatism, macerate the young Shoots of Tansie some Days in Brandy, and then distil it: The Spirit is very penetrating. Bathe frequently the afflicted Parts, and cover them with warm Cloths. Let the Patient drink two or three Spoonfuls of it every Day. It is very good for hydropic Cases; and the Decoction of Tansie with Wine is excellent to make Fomentations upon their Legs. For the Cachexy, Dropsy, or Green Sickness, drink three or four Ounces of the Juice; or else make a Tea of its Leaves, Flowers, and Seeds; cover the Pot, and, when cool, give it by Glass-fuls, in a malignant Fever, and the Diseases of the lower Belly: It cleanses the urinary Passages, purifies the Blood, removes Obstructions, and kills Worms. The Conserve of the Flowers of Tansie is esteemed for the Epilepsy and Vertigo. *Martyn's Tournefort.*

It is usual, in time of *Easter*, to make a sort of Cakes of Eggs and Flour, mixed with the tender Leaves of Tansie, when it begins to shoot: These Cakes are not unpleasant to the Taste, and good for the Stomach, on account of dissolving the Flatulencies, generated by eating Puls and Fish, during *Lent*: The Tufts and Seed are often exhibited by Mountebanks, with surprising Success, for the Worms. A Conserve of the Leaves, and tender Tops, resists Putrefaction, opens Obstructions, comforts the Spleen, and invigorates the Senses. The Juice, used with any Kind of Oil, is said to give Relief in Pains and Contractions of the Nerves.

A Soldier of *Montpelier*, labouring under a stubborn Dropsy, was restored to perfect Health, by a Decoction only of Tansie. *Raii Hist. Plant.*

Tansie, in Temperature and Virtues, agrees with Feverfew: It is vulnerary, uterine, and nephritic; and is principally used against Worms, the Gripes, Stone in the Kidneys and Bladder, Obstructions of the Menfes, Flatulencies, and the Dropsy. The distilled Water kills Worms. *Dale.*

3. Tanacetum; Foliis crispis. C. B. P. 432.

4. Tanacetum; Africanum; arborescens; Foliis Lavendulae, multifido Folio. H. A. 2. 201.

5. Tanacetum; Africanum; frutescens; Foliis Lavendulae multifidæ longe minoribus, graveolens.

6. Tanacetum; Africanum; fruticans; multiflorum; Foliis Tanaceti vulgaris decuplo minoribus. H. A. 2. 199.

Tansie is considerably aromatic, very penetrating, comforting, aperitive, and heating: The first, second, and third Species afford the *Semen Santonicum Europæum*, as good against Worms as the *Santonicum Aegyptiacum*. An Infusion of the Leaves drank, or a Cataplasm of the Flowers applied to the Navel, the distilled Water of the Flowers, or the Seed taken in Wine fasting, or three Ounces of the Decoction of the Leaves sweeten'd with Syrup or Honey, and so taken, are effectual for the same Purpose. These Herbs are balsamic, and extremely bitter, and may supply the Places of Nutmegs and Cinnamon: For I believe *Asa* does not afford a Plant of greater Fragrancy than those Species of Tansie: They are, also, taken for the *Parthenium* of the Antients. The Leaves applied to a dead Body, and intruded into the Mouth and Nostrils, preserve it from Putrefaction and Insects; whence the Plant is called *Athanassa*, that is, the immortal Plant. The Juice performs the Effects of those of Wormwood and Feverfew in Conjunction. The latter Species are of a strong Smell, and proper in all cold Diseases. *Casalpinus* tells us, that the Leaves of this Herb, infused in Wine, provoke the Menfes; that the Juice, drank with Plantain-water, cures all intermitting Fevers, with the Itch, Rheumatism, and Dropsy. Fomentations, prepared of the Leaves, are of great Use, and the Juice of the Plant relieves those who labour under a Chlorosis and Cachexy. The Conserve hereof is good for the Epilepsy, Colic, and hysteric Passion, and cleanses the Kidneys from Sand and Gravel. Tansie agrees in Virtue with Savine, Feverfew, and Southernwood; and is now used in Baths for the Uterus. The Flowers, dressed in a Cake, are of excellent Service in corroborating the Stomach. *Hist. Plant. adscript. Boerhaav.*

# T A P

TANACETUM is, also, a Name for several Sorts of TAGETES; which see.

TANACETUM HORTENSE. A Name for the BALSAMITA MAS; which see.

TANACETUM INODORUM. A Name for the *Leucanthemum Tanaceti*; folio; flore majore.

TANACETUM MINUS. A Name for the *Millefolium, nobile, Tragi.*

TANACETUM MONTANUM. A Name for the *Millefolium; Tanaceti foliis; flore albo.*

TANGARACA. Marcgr. Tangar. 2. Pison. Erva de Rato Lusitanis, Frutex baccifer Brasiliensis, Flore staminoso, Fructu deleterio. A Brazilian bacciferous Shrub, whose Fruit is present Poison. *Raii Hist. Plant.*

TANGÈ, τανγῆ, in *Hippocrates*, is a preternatural Tumor; and, *Lib. 2. Epid.* is a putrefying Tumor. Some understand by the Word a stumous Swelling. *Cornarius* renders τανγῆ (Tangai) putrefying Tumors, because the Verb τανγγίζω (tangizo) signifies to become putrid or rancid; whence ἐλαιον τανγγόν, a putrid or rancid Oil. *Foesius.*

TANI. H. M. *Prunus Indica racemosa, Fructu pyriformi.* A kind of Plum-tree, growing in the *East-Indies*, and bearing a Pear-shaped Fruit, of the Size of a large Plum, consisting of a green, succulent, and insipid Pulp, surrounded with a smooth, shining, and red Skin, and containing an oblong-round Stone, which incloses a white Kernel, of a grateful Taste, and much resembling that of a Filberd.

The Kernels of the Fruit are eatable, and, being pulverized, cure that epidemic Cachexy, which the *Portuguese* call *Pituo*, and correct Disorders of the Eyes: The expressed Oil thereof, the Head being anointed therewith, strengthens the Hair: The Bark of the Tree is accounted an Antidote against the Poison of the Tree *Katou Tsjeron*, and its Fruit, however communicated: It is exhibited, finely triturated with a small Quantity of *Asa-fetida*. The Juice of the Bark and Root, boiled with Rice and Milk, mitigates the Pain of the Colic. *Raii Hist. Plant.*

TANTALUS, among the Alchymists, in the Affair of the Philosophers Stone, is an enigmatical Term for Mercury or Quicksilver. *Theat. Chym. Vol. 4.*

TAPHIUSIUS (*Lapis*) a fourth Species of *Ætites*, in *Pliny*, *Lib. 36. Cap. 11.* so called from the Place where it is found, *Taphiusa*, near *Leucadia*, now the Island of *St. Moura*. At present, says *Schroder*, it is unknown.

TAPHNEUS, a Term in *Paracelsus*, for a Species of Earth, whence are produced such Things as change not their Nature by Reverberation, or Calcination. *L. Grad. et Comp. Or. Taphneus* is a Medicine mundify'd, *Schol. in Lib. 7. L. Grad. et Comp. Cap. 9.*

TAPIA. *Brasil.* Marcgrav. Pison. *Pomifera trifolia Brasiliensis Fructu corticoso multis Officulis Pericarpio inclusis pleno.* This is a Tree of *Brasil*, which grows to the Height of a Beech, or Oak, and bears a Fruit of the Size of a moderate Apple, which, when ripe, becomes yellow, like an Orange, and has a Rind equal to it; within which it is full of hard little Stones, of the Size of Cherry-stones, oblong, yellow, and containing a white Kernel; about the Stones is a white soft Pulp, of a sweet Taste, and a nauseous Smell; the Fruit is eatable.

The Leaves, bruise'd, are an excellent Remedy against a Disorder very common in *Brasil*, and which they call *Richos de Cu*, being externally applied, and intruded into the Anus, like a Suppository. They are, also, cooling, and extinguish all manner of preternatural Heats, and mitigate Pains: Besides, being introduced into the Ears, they mitigate Pains of the Head, proceeding from Heat.

There are two Species of this Tree; the Wood of the first is esteem'd the hardest, and is the most ponderous, of all the Woods which grow in this Country; this Tree is accounted barren.

The other Species, which was known to *Piso*, has a smooth large Leaf, and bears a Fruit bigger than an Orange, with an hard, thick, yellowish Rind, variegated with ash-colour Spots, and containing an Honey-like Liquor, as sweet as Sugar, in which are intermixed a Multitude of little Stones, which, when the Liquor is dry'd up, make a rattling Noise, like Poppy-heads.

This Plant is used in Medicine, for Diseases of the Breast. *Raii Hist. Plant.*

TAPIRA pecis. A Species of smooth *Sonchus*, in *Piso*. It grows with a single Stalk, above the Height of a Man's Leg, and has narrow, oblong, dentated, lanuginous Leaves, and white Flowers towards the Top of the Stalk, laden with Down. This Plant is an excellent Vulnerary. *Raii Hist. Plant. Index.*

TAPSIMEL. HONEY OF MULLEN.

Take of the Juice of Celandine, and bearded Mullen, each one Pint; of despumated Honey, three Parts; boil gradually, till the Juices are evaporated; adding, if the Operator pleases, calcined Vitriol and Alum, with Copperas, and again boil into an Ointment.

The first College Dispensatory adds from the Author, that, if Occasion requires, this should be, at least, boil'd up to a pretty thick Con-



# T A R

Confistence; and says, that it certainly will cure Itchings in any Part of the Body, and is a most noble Ointment. But, it seems, the present Practice has no Regard for it, as neither this, nor the following, are ever prescribed, or made. However, it has been thought fit to continue such Discoveries upon Record, for the sake of those who may think proper to make Trial of them.

TAPSI VALENTIA. THE POWERS OF MULLEN.

Take of the Juice of bearded Mullen, and of Hog's-lard, each as much as you please; let the Lard be cleansed of its Membranes and Fibres, and broke into small Parcels; then beat it with the expressed Juice; press out, and strain. Let it, afterwards, be put into a proper Vessel, for nine or ten Days; and then be twice more impregnated with fresh Juice, until it be quite green. Lastly, after all the Humidity, that will separate, is pour'd off, beat it again briskly, and put it by, in a proper Manner, for Use.

We are told by the first Compilers of the College Dispensatory, that this, and the preceding Process, were the Contrivance of *John Arden* an experienced Surgeon, at *Newark* in *Nottinghamshire*, who lived in the Reign of *Edward* the Third; and, about three hundred Years ago, were in great Esteem among the Surgeons of our own Country. The Contriver directs the Medicines, thus made, to be fresh beat once in a Month.

TAPSUS BARBATUS. See VERBASCUM.

TAPYRA-COAYNANA, *Brasilensibus*. Marcgr. et Pison. *Cassia fistula Brasiliiana*. C. B. *Solutiva Brasiliiana*. Park. *Cassia Siliqua Brasiliiana purgatrix compressa*. Lob. in Pharmac. Rond. *Cassia fistula Brasiliiana Flore incarnato*. Breyn.

It is a great, tall, and very spreading Tree, outwardly of a whitish Ash-colour; the Leaves stand in opposite Order, upon very short Pellicles, like the Leaves of *Sena*; the Flowers are disposed in Spikes, without Branches, and consist of five Petals, with three little semilunar Horns, which stand erect, in Conjunction with the Stamina; the Whole of a very fine carnation Colour, and visible at a great Distance. These Flowers are succeeded by Pods, green while immature, but black, or dusky-colour'd, when ripe, propending downwards, about two Feet long, and five Digits in Compass, and somewhat incurved. These Pods have a very hard ligneous Bark, which requires an Hammer to break it; and consist of a Multitude of Cells, of the Capacity of a Goose-quill, separated by Partitions, and containing every one a Kernel, of the Size and Figure of an Almond, of a white Colour, inclining to yellow, shining, smooth; of a white Medulla on the Inside, of an horny Substance, and immersed in a glutinous, blackish Pulp, like *Cassia Solutiva*, but of a bitter and ungrateful Taste; of a binding Quality before Maturity, but laxative, or solutive, afterwards.

The Tops of the Leaves cure Wounds and Pustules; and one Ounce of the Pulp, as *Lobel* observes, purges more than two Ounces of the other, or *Egyptian Cassia*. *Raii Hist. Plant.*

TARACHE, *ταραχί*. The same as TARAXIS.

TARANTISMUS. The Disorder which is said to be produced by the Bite of a *Tarantula*.

TARANTULA. The *Tarantula* (of which the Figure may be seen in *Bagliu's* Dissertation) is a Spider of *Apulia*, of the octonocular Kind; that is, of that Species that has eight Eyes, and spins Webs; it has eight Legs, four on each Side, and in each Leg three Joints; from the Mouth proceed two Darts, in Shape just like to a hooked Forceps, or Crab's Claw; these are solid, and very sharp, so that they can easily pierce the Skin; and between these and the fore Legs, there are two little Horns, which, I suppose, answer to those Bodies, call'd, from their Use in Flies, the Feelers; because as they do, so this Creature is observed to move them very briskly, when it approaches to its Prey.

This, as other Spiders do, propagates its Species by laying Eggs, which are very numerous; so that there are found sometimes, in the Female, when dissected, an hundred, or more; and these are hatched, partly by the Heat of the Mother, and partly by that of the Sun, in about twenty or thirty Days time.

There is, also, a Spider, of the like Nature with the *Tarantula*, in the *West-Indies*, which *Francis Hernandez* describes by the Name of *Hoitzotatl*, or the Pricking Spider; and says, that its Bite induces Madness.

In the Summer Months, especially when the Heats are greatest, as in the Dog-days, the *Tarantula*, creeping among the Corn in the Fields, bites the Mowers and Passengers; in the Winter it lurks in Holes, and is scarcely seen; and, if it bites then, it is not venomous, neither does it induce any ill Symptoms.

But in the hot Weather, altho' the Pain of its Bite is, at first, no greater than what is caused by the Sting of a Bee, yet the Part, quickly after, is discoloured with a livid, black, or yellowish Circle, and raised to an inflamed Swelling; the Patient, within a few Hours, is seized with a violent Sickness, Difficulty of Breathing, universal Faintness, and sometimes Trembling, with a Weakness of the Head: Being ask'd, what the Ail is, makes no Reply; or, with a querulous Voice, and melancholy Look, points to his Breast, as if the Heart was most affected.

# T A R

During this mournful Scene, all the usual alexipharmic and cordial Medicines are of no Service; for, notwithstanding their repeated Use, the Patient growing, by degrees, more melancholy, stupid, and strangely timorous, in a short time expires; unless Music be call'd to his Assistance, which alone, without the Help of Medicine, performs the Cure.

For, at the first Sound of the musical Instrument, altho' the Sick lie, as it were, in an apoplectic Fit, they begin, by degrees, to move their Hands and Feet; till, at last, they get up, and fall to Dancing with wonderful Vigour; at first, for three or four Hours; then they are put to Bed; refreshed from their Sweating for a short time, and repeat the Exercise with the same Vehemence, perceiving no Weariness or Weakness from it, but professing they grow stronger and nimbler, the more they dance.

At this Sport they usually spend twelve Hours a Day, and it continues three or four Days; by which time they are generally freed from all their Symptoms, which, nevertheless, attack them again, about the same time, the next Year; and, if they do not take care to prevent this Relapse by Music, they fall into a Jaundice, want of Appetite, universal Weakness, and such-like Diseases, which are every Year increased, if Dancing be neglected, till at last they prove incurable.

As Music is the common Cure, so they who are bitten, are pleased, some with one Sort of it, some with another; one is raised with a Pipe, another with a Timbrel; one with an Harp, another with a Fiddle; so that the Musicians make, sometimes, several Essays, before they can accommodate their Art to the Venom. But this is constant and certain, notwithstanding this Variety, that they all require the quickest and briskest Tunes, and are never moved by a slow, dull Harmony.

While the *Tarantati*, or Affected, are dancing, they lose, in a manner, the Use of all their Senses, like so many Drunkards; do many ridiculous and foolish Tricks; talk and act obscenely and rudely; take great Pleasure in playing with Vine-leaves, with naked Swords, red Cloths, and the like; and, on the other hand, can't bear the Sight of any thing black; so that if any By-stander happen to appear in that Colour, he must immediately withdraw; otherwise, they relapse into their Symptoms with as much Violence as ever.

It may afford some Light towards understanding the Nature of this Poison, to observe, that *Apulia* is the hottest Part of all *Italy*, lying Eastward, and having, all the Summer long, but very little Rain to temper the Heats; so that the Inhabitants, as one of that Country observes, breathe an Air, as it were, out of a fiery Furnace: Hence their Temperament is dry and adust, as appears by their being generally lean, passionate, impatient, ready to Action, quick-witted, very subject to inflammatory Distempers, Phrenies, Melancholy, and the like; upon which Account, there are more mad People in this, than in all the other Parts of *Italy*: And what in other Countries is but a light Melancholy, arises here to a great Height; for Women in a Chlorosis suffer almost the same Symptoms as Persons poison'd by the *Tarantula*, and are cured the same Way; and, in like manner, the Venom of the Scorpion, does here, in Effects and Cure, agree very much with that of this Spider.

From all this History, it sufficiently appears, that those that are bitten by a *Tarantula*, thereupon, become delirious; and that, in order to account for their surprising Symptoms, the Nature of a Delirium, from which many of them proceed, ought to be understood.

Such is the Constitution of the human Oeconomy, that as, upon the Impression of outward Objects made upon the Organs, and by the Fluid of the Nerves, convey'd to the common Sensory, different Species are excited there, and represented to the Mind; so, also, upon this Representation, at the Command and Pleasure of the Soul, Part of the same Fluid is determined into the Muscles, and, mixing with the arterial Blood there, performs all the Variety of voluntary Motions and Actions.

This Order has been always so constant in us, that, at length, by a kind of natural Habitude, without the Intervention of the reasoning Faculty, Representations made to the Mind immediately, and necessarily, produce suitable Motions in the bodily Organs. When, therefore, these Representations are irregular, the Actions consequent to them must necessarily be so too.

This being premised, it may, perhaps, be probably said, that a Delirium is the Representation, and various Composition, of several Species to the Mind, without any Order, or Coherence; together, at least most commonly, with irregular, or, as it were, undesign'd Motions of the Body; that is, such a wandering and irregular Motion of the nervous Fluid, whereby several Objects are represented to the Mind, and, upon this Representation, divers Operations perform'd by the Body, tho' those Objects are not impress'd upon the Organs, nor those Operations or Motions deliberately commanded by the Soul.

The Mind, indeed, is the first Principle of all muscular Motion; but, in such Cases as these, its Promptitude to Action, or Habit, being so great, it is, in a manner, surpris'd, and cannot recover itself, after the Spirits are, with violent Force, determin'd, pursuant to the Representation of the Species. For, as, in the former State of Things, a Man is said to act rationally, so this



this latter Case is called a Perturbation of Mind, that is, a *Delirium*; tho' it is very manifest, that, in Reality, the Defect is not in the rational, but corporeal Part; such Species being really presented to the Mind, upon which, by the Order of our Constitution, such Motions ought to follow in the Body.

Thus, for Instance, if the Liquor of the Nerves is, without the Presence of any thing hurtful, put into a Motion, like that which a painful Impression makes in it, the same bodily Actions must ensue, as proceed from Fear, Anger, or the like Passion, determining the Spirits towards the muscular Parts; and a By-stander, who sees no Reason for such a Representation made to the Mind, will presently conclude, that the Person thus acting acts without, or besides, his Reason, that is, is delirious; especially if the Hurry and Confusion of the Spirits be such, that not only one, but several different Species, be, at the same time, presented to the Mind; for a Man, in this Case, may act the Part of one joyful, angry, timorous, or the like, without any appearing Reason, and all this, almost, in the same Moment of Time.

In one Word; *Deliria* are the Dreams of those who are awake: And as these in us sleeping are infinitely various, and wonderfully compounded, and all from the same common Cause, diversely pressing the Orifices of the Nerves, and thus making different Repercussions of their Fluid; and as we all know, that this Confusion making the Representation of several Species to the Mind, there hereupon follow, tho' the Body seem now at Rest, and in perfect Repose, such Motions in the Organs, as are, usually, the Effect of the arbitrary Determination of the Spirit thither; we are now to inquire, what Alteration of the Body, made by this Venom, can be the Occasion of this Disorder and Tumult in the nervous Fluid, which excites, in the Party infected, such surprising, and almost contradictory, Representations.

Most of the Symptoms of those who are bitten by the *Tarantula*, are, at the first, that is, before they rise to a Delirium, plainly the same with those which the Bite of a Viper induces. Without Doubt, therefore, as we have before observed [under *ARANEAE*] of the common Spider, that it pierces the Flesh with its hooked Forceps, and, at the same time, instils from the Proboscis in the Mouth, a liquid Venom into the Wound; so the like Claws, in this, serve to make way for an active and penetrating Juice, emitted from the same Part.

Of the Nature of which we may probably conjecture, that it is, when mix'd with the Blood, being exalted by the Heat of the Climate, of so great Force and Energy, that it immediately raises an extraordinary Fermentation in the whole arterial Fluid, by which its Texture and Crasis are very considerably alter'd; the Consequence of which Alteration, when the Ebullition is over, must necessarily be a Change in the Cohesion of its Parts, by which the Globules, which before, with equal Force, pressed each other, have now a very differing and irregular Nihilus, or Action, so that some of them do firmly cohere together, as to compose Molecules, or small Clusters; upon which account, there being now a greater Number of Globules contained in the same Space than before, and, besides, the Impulse of many of these, when united together, differing according to the Conditions of their Cohesion, as to Magnitude, Figure, and other Qualities, not only will the Impetus, with which this Fluid is drove towards the Parts, beat some Strokes at least greater than ordinary; but the Pressure upon the Blood-vessels must be very unequal and irregular; and this, more especially, will be felt in them which are most easily distended; such as those of the Brain. And, hereupon, the Fluid of the Nerves must necessarily be put into various undulatory Motions, some of which will be like unto those which different Objects, acting upon the Organs or Passions of the Mind, naturally excite in it; whereupon such Actions must follow in the Body, as are usually the Consequents of the several Species of Sadness, Joy, Despair, or the like Determinations of the Thoughts; and we shall readily pronounce one in this Condition, sad, joyful, or timorous, and all without any apparent Reason or Cause; that is, in one Word, we shall say, he is delirious.

This is, in some Degree, a Coagulation of the Blood, which will the more certainly, when attended with an extraordinary Heat, as in the present Case, produce such-like Effects as these, because the Spirits separated from the Blood thus inflamed, and compounded of hard, fixt, and dry Particles, must unavoidably share in this Alteration; that is, whereas their Fluid consists of two Parts, one more active and volatile, the other viscid and glutinous, which is a kind of Vehicle to the former, their active Part will bear too great a Proportion to the viscid; and thus they must necessarily be of more than ordinary Volatility and Force, and will, therefore, upon the least Occasion imaginable, be irregularly determined to every Part; and hereupon will follow Tremblings of the Body; Anger, or Fear, upon a light, or no Cause; extreme Pleasure at what is but a trivial Entertainment, as red, green Colours, or the like; and, on the other hand, wonderful Sadness at any thing not agreeable to the Eyes, as dark and black Things; nay, ridiculous Laughter, obscene Talk and Actions, and such-like Symptoms; because, in this Constitution of the nervous Fluid, the most light Occasion will make as real a Re-

flux and Undulation of it to the Brain, that is, will present as lively and vivid Species there, as the strongest Cause and Impression can produce in its natural State and Condition; and, in such a Confusion, the Spirits cannot but sometimes, without any manifest Cause at all, be hurried towards those Organs, to which, at other times, they have been most frequently determined; and every one knows which they are in hot Countries and Constitutions.

It must, however, be remember'd, that the nervous Fluid is immediately alter'd by the venomous Juice. It will, perhaps, make this Theory more than probable, that *Bagliivi*, in the Dissection of a Rabbit kill'd by a *Tarantula*, found the Blood-vessels of the Brain very turgid, and the Substance of the Brain itself, that is, the Beginning of the Nerves, lightly inflamed, and with livid Spots here and there; the Lungs, and other Viscera, distended with concrete clotted Blood, and large Grumes of Blood, with polypous Branches in the Heart; a large Quantity of extravasated Serum upon the Brain, which is (as he takes Notice) mostly observed in those Subjects which died by a Coagulation of the Blood.

Neither is it amiss to remark, that in a Chlorosis there is nothing preternatural, but an Infarction of the Arteries; and hence a retarded Circulation, from an Evacuation suppress'd; and, in this Country, too much Heat; that is, a beginning Coagulation, together with an inflammatory Disposition.

In short, *Bellini* has, at large, demonstrated, how *Deliria*, as well melancholic as maniacal, proceed from a State of the Blood and Spirits, not unlike to that I have here described.

But no less a Confirmation of these Notions may we have from the Cure; as to which, it is observable, that the *Tarantati* have no Inclination to dance, before they hear the Music; for, being ask'd to do it, they answer, 'Tis impossible, they have no Strength.

As for the Reason, therefore, of their starting up at the first Noise of the Instrument, we must reflect upon what we have just now been saying, concerning the Cause of the Motions of the Body in a Delirium; and consider withal, that muscular Motion is no other than a Contraction of the Fibres from the arterial Fluid, making an Effervescence with the nervous Juice, which, by the light Vibration and Tremor of the Nerve, is derived into the Muscles.

And thus we have a twofold Effect and Operation of Music; that is, both upon the Mind and Body.

To conclude with this Poison, we may take notice, that, as to the Return of the Symptoms the next Year, that is owing to the same excessive Heat in those Months acting again upon the small Remains of the venomous Ferment: Thus *Bartholine* relates a Story of a melancholy Physician at *Venice*, who suffered the Attacks of this Disease only during the Dog-days, which yearly ended and returned with them. A convincing Proof, how great a Share Heat has in all these Cases. *Mead on Poisons*.

*Bagliivi*, who resided in *Italy*, and probably had good Opportunities of informing himself with respect to this Insect, has written a Treatise expressly upon this Subject; and most medicinal Writers mention the Distempers arising from the Bite thereof, as a Thing certain, and not to be disputed. But, notwithstanding all these great Authorities, there is good Reason to believe, that the whole Story is fabulous, and a vulgar Error; for it is treated as such by an *Italian* Physician in the *Philosophical Transactions*; and the late Mr. *Stanhope*, Brother to the Earl of *Harrington*, who resided at *Taranto* many Months, and during the Season, in which the Bite of a *Tarantula* is said to be most pernicious, assured me, that there was not a Physician in the Country, who believed there ever was such a Distemper, from such a Cause; that, amongst the Vulgar, there was a Tradition, that Distempers, attended with very extraordinary Circumstances, had been excited by the Bite of the *Tarantula*, but that nobody ever remembered a single Instance; and that he hired People to search in the Fields for this Insect, but could never procure one; nor ever learn, that any Sort of Spiders were to be found, different from those, which are common in most warm Countries. This was confirmed to me by a Gentleman of Honour and Fortune, now alive, who, likewise, resided for a considerable time at *Taranto*, and who, upon the strictest Inquiry, met with much the same Information. This last Gentleman told me, that the most eminent Physicians at *Taranto* told him, that what gave Rise to the vulgar Error, relative to the Bite of the *Tarantula*, was an epidemical Fever, which frequently affected the Country-people during Harvest, and which was usually attended with a few petechial Eruptions, and some very odd nervous Symptoms; and this Disorder the unthinking Vulgar, always fond of the Marvellous, had sometimes idly attributed to the Bite of a *Tarantula*. And his Opinion is, I think, confirmed by the Accounts we have, of the Disorders incident to the People of *Apulia*. Thus *Frederic Hoffman*, speaking of the Diseases to which the *Italians* are subject, says, that the Inhabitants of *Apulia* are highly subject to burning Fevers, Pleuritis, and other inflammatory Disorders, which, in a great measure, draw their Origin from that Redundance of Blood, which is generated by the high Living of the Inhabitants; for here the Soil is incredibly fertile; and large Quantities of Flesh are eaten by the Natives. Here, also, the Wines are black, fragrant, and rich, and



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the Air so intensely hot, as not only to render the Inhabitants highly impatient and uneasy, but very frequently delirious.

TARAXACUM. A Name for the *Deus Leonis latiore folio*.

TARAXIS, τάρaxis, from ταραίνω, to disturb, a Disturbance, is frequently used by *Hippocrates*, as well as the Verb, from whence it is derived, to signify such a Disturbance, or Perturbation, of the Belly and Intestines, as is excited by some Cathartic, or other Means, irritating them to Excretion. The Verb ταραίνω, according to *Galen*, *Com. 3. in Lib. de R. V. I. A.* indicates, in that Place, not a moderate, but a profuse Evacuation by Stool. In this Sense we are told, by *Hippocrates*, in the same Book, that Hydromel, drank by itself, is more effectual than Water, *εἰ μὴ ταραίνῃ τὴν κοιλίην*, "if it does not disturb the Belly," that is, waite the Strength by immoderate Irritations of the Belly. In *Coac. 342. ἐκτάρaxis (Ectaraxis) κοιλίης* imports a critical Excretion, or such a Disturbance, or Perturbation, excited in the Belly, as issues in a sudden, violent, and profuse Discharge of its Contents. *Hippocrates* often uses ταραχώδεις κοιλίαι to express the Belly under Irritations to Excretion, and actually discharging its Contents, particularly *Coac. 10.* And in the same Sense is the Word ἐκτάρaxis used, 2 *Prorrhet.* where we read, *αἱ κοιλίαι ἰσχυρὰς ἐδύνας ἐχέσαι ἀνεκτάρaxiαν*, "the Belly labouring under violent Pains, without Perturbations" (in order to Evacuation); agreeably to which Sense, *Celsus*, *Cap. 8. Lib. 2.* renders ἐκτάρaxis κοιλίην, 4 *Aph. 60. Ventrem resolutum*, "a loosen'd Belly."

The Adjective tarachodes, ταραχώδης, frequently signifies, also, turbulent, and is applied to those, who are disturbed and disordered for little or no Reason, which is an Indication of a delirious and disordered Mind. The same is applied to Diseases, Fevers, and Sleep attended with irregular Perturbations, and mental Disorders.

Τάρaxis, Taraxis, is, also, a Disease of the Eye, consisting in a Perturbation of that Part, when it is offended by some Compression, Attraction, Smoke, or the like. The Author of the *Isisage* reckons, among ophthalmic Disorders, the Taraxis, which is, he says, when the Eye appears redder than ordinary, on occasion of some slight and superficial Commotion. But *Galen*, in 6 *Epid. Com. 5.* makes a Taraxis to be a morbid Disposition of the Eye, preceding an Inflammation, and the Beginning of an Inflammation; and *Paulus*, *Lib. 3. Cap. 22.* defines it to be an Heat and Humidity of the Eye, attended with a preternatural Redness, proceeding, not from the Body, but some external Cause, as the Sun, Smoke, Dust, and Wind; whence the Disorder is very speedily remedied, by removing the Cause.

TARBASON, or LARBASON. Antimony.

TARCHON. The same as DRACO HERBA.

TARDA. The Bultard; the same as OTIS.

TARERIAYA. The Name of a *Brazilian* siliquous Sort of Cinquetoil, of no Use in Medicine.

TARIROQUI. The Name of a *Brazilian* Vetch, called, by the *Portuguese*, *Metapasto*, of no Use in Medicine.

TARFAT, or TARFE. A barbarous Word, importing an Lechymosis, or Sugillation.

TARGAR. Oil of Juniper, *Rulandus*.

TARICHOS, τάρichος, *Lat. Salsamentum*, Salt-meats, properly Fish seasoned and kept in Salt, and especially the Thynnus, of which Kind are also the Cybia, as appears from the fifth Book of *Galen*, *de C. M. S. L.* at the End, and from *Athenæus*, *Lib. 3.* at the End; and also from *Pliny*, who assures us, that the Pelamis, (a large Fish, see the Article CYBIUM) cut into Pieces, belonged to the Cybia, *Lib. 32. Cap. 11.* and *Lib. 9. Cap. 15.* *Suidas* expounds τάρichος by τὰ κρέας ἀλασι πεπασμένον, "Flesh sprinkled with Salt;" and τάρichος signifies not only what is seasoned, and kept in Salt, but what is dried, and preserved without Salt. Τάρichος γὰδ αἰεὶ κρέας, "such Salt-meats, as come from Gades," are recommended by *Hippocrates*, *Lib. de intern. Affect.* in more than one Place, to be eaten in an Anasarca. The same Author, *Lib. de Cap. Vuln.* in describing an Ulcer of fatal Prognostication, and drying up a little before Death, says, *καὶ φαίνεται ὡς σπὴρ τάρichος*. "It looks, also, like Flesh macerated and dried in Salt." And, *Lib. 2. de Morbis*, he advises eating the best and tastest Tarichos (Salt-meats). *Heslæus* *Lib. 2. de R. V. I. A. 16.* to dry up, emaciate, and extenuate Patients with Hunger and Fasting, which was the Practice of some Physicians in the Time of *Hippocrates*, who, in the Beginning of Diseases, tormented the Sick with three or more Days total Abstinence. The Word is used in the same Sense by *Galen*, *Lib. 8. M. M.* and applied to the *Diatritarii* of his Time. See DIATRITOS.

TARITH. Mercury. *Rulandus*.

TARSI. A Name for the *Cyperus*; *rotundus*; *esulentus*; *angustifolius*.

TARSO is a kind of hard, and most white Marble, found in *Tuscan*, at the Foot of the *Vernicola* of *Pisa* at *Seravezza*, and at the *Massa* of *Carara*, and in the River *Arno*, above and below *Florence*; and it is, also, well known in other Places. It is used in making Glafs. *Ant. Neri*.

TARSUS, τάρσος. The Space between the Bones of the Leg and the Metatarsus. It consists of seven Bones; the *Astragalus*,

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or *Talus*, *Calcaneum*, *Naviculare*, three *Ossa Cuneiformia*, and the *Cubiforme*.

The cartilaginous Edges of the Eye-lids, out of which the Eye-lashes grow, are, also, called *Tarfi*.

TARTARIAN. A barbarous Name for the Spirit of Tartar.

TARTARUS. Tartar.

*The Generation of Tartar from Wine.*

Wines, especially those prepared from Grapes, or of an acid and austere Taste, usually afford a copious Tartar, but not in Perfection, till they are once thoroughly fermented; and they afford the purest, when put up into a clean Vessel. It is more plentifully obtained from the Wine, when this has rested some time upon the Lees, and, in some measure, gently consumed. The Tartar of fine White-wine is white; whence *Rhenish* Wine affords the best, which is white; and collected in thick Pieces, for Medicinal Use; and the whiter, heavier, more shining, and thick, the Pieces are, the better. That of Red-wine is red, more impure, less firm, and the Pieces less solid, and more unctuous: This stony Salt of Wine is difficultly dissolved in Water, or Wine itself, but remains almost like a Stone therein. If boiled in a large Proportion of Water, it dissolves in some measure, and makes a turbid Liquor, wherein numerous shining Corpuscles are observed to float; and thus, in the Boiling, it constantly throws up a Skum to the Surface; which, if taken off with a Skimmer, and put into a wide Vessel to be dried, is called by the Name of *Cream of Tartar*: And thus, by degrees, the whole Quantity of Tartar may be converted into a kind of white acid Powder, excepting only a few feculent Parts, remaining at the Bottom.

If pure white Tartar be boiled with twenty times its Quantity, or more, of Water, till the Whole is perfectly dissolved therein, and the boiling Liquor be now immediately put into a Cask, without admitting any Faeces, a Crust will presently begin to form in all the internal Parts of the Vessel touched by the Liquor; and this Crust increases, till, in a short time, nearly all the Tartar shoots into little shining figured Lumps, called *Crytals of Tartar*; which, being collected, and gently dried, are thus to be preserved separate. The remaining Water, when cold, retains but little of the Tartar.

These Operations shew, that the Nature of the Salt, which is produced by vinous Fermentation, entirely differs, in these Properties, from any other known Salt. A new Solution, also, of the Cream or Crytal of Tartar, may be made in fresh boiling Water, so as to obtain them each time more pure and white, but the Virtue of them both scarce appears greater for any chymical or medicinal Uses, than that of Tartar itself.

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A Knowledge of this Process greatly conduces to the understanding the Nature of Fermentation, and the Tartar produced thereby. And thus we procure this wonderful Salt suited to so many Uses. Dyers, Silverfinishers, Chymists, and Physicians, require it on many Occasions. The Chymists prepare many Things from it, and some of them capital ones. In Medicine it is highly serviceable for gently cleansing the first Passages, in a small Dose, or for purging strongly in a larger Quantity. And upon this Subject that candid Chymist *Angelus Sala* has written excellently.

*The Resolution of Tartar into Water, an acid Spirit, Oil, and fixed alkaline Salt, by Distillation.*

Fill Two-thirds of a glass Retort with choice Pieces of the best white Tartar, and place it in a Sand-furnace; apply a large Glass Receiver, or one that is of the greatest Size; and lute the Juncture with a common Mixture of Linseed-meal: Apply a gentle Fire for some considerable time, scarce exceeding a hundred Degrees; there will come over a small Quantity of a limpid, thin, tartish, somewhat spirituous, bitterish, and highly-odorous Liquor, which is so penetrating, as easily to sweat through the Luting. Let this be kept separate; then the Fire being raised to the Heat of boiling Water, a white Vapour comes over, and along with it an highly penetrating Spirit, which is wonderfully flatulent, and will pass through almost any Luting; and, if we endeavour to confine it by that called the *Lutum Sapientiae*, it bursts the Glass by its Elasticity; and it usually breaks out with Force, or perspires, at Intervals, through the Luting; and, along with this wild flatulent Spirit, there comes over a thin and extremely subtle Oil, of a yellow Colour, a somewhat aromatic Taste, bitter, heating, and of no ungrateful Odour. This surprising Oil I have found so incredibly penetrating, that when the Neck of the Retort entered five Inches into the Mouth of the Receiver, and the Juncture was closely luted, yet this volatile Oil always returned back, and passed through the Body of the Luting, so as partly to distil in Drops, into a Cup set underneath, and in part to run down the external Surface of the Receiver. Nor could I hitherto, by any means, prevent this Effect, for, if a Luting be applied, that the Oil cannot pass through, the Vessel

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fel flies to Pieces. I did not therefore wonder to find *Paracelsus* and *Helmont* so highly recommend this Oil in Diseases of the Ligaments, Membranes, and Tendons, which they, upon Experience, have declared, may be cured by it, even though contracted.

The former Matters being collected separate, let the Remainder be urged gradually to the utmost Degree of Heat that Sand will give; and thus again a Spirit will come over, and an Oil, as before; but at the same time a gross, black, fetid, ponderous, glutinous, and bitter Oil, leaving the remaining Tartar black, sharp, and, in every respect, truly alkaline. If this Mass be urged with the strongest Fire of Suppression, it will still yield a very thick, black, and pitchy Oil, along with a certain Smoke; and these will continue to rise, how violent soever the Fire be made, and how long soever the Operation is continued; and there will still remain an extremely black, sharp, alkaline, and dry Mass, at the Bottom; which, being exposed to the open Air, by breaking the Glass, grows hot, upon Contact therewith, and readily dissolves into a Liquor; nor can it be kept dry, without great Caution; whereas the Tartar, from whence it was produced, would scarce dissolve in Water.

When this black dry Mass is exposed to a naked Fire, in the open Air, it takes Flame; and, after burning, leaves a copious white alkaline Salt behind, as strong, fiery, and pure, as can any way be prepared. It affords but little Earth, and readily dissolves of itself: If long detained in a strong Fire, it grows blue, or a marble Colour, and sometimes brown; and thus always becomes stronger.

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From hence we learn many Particulars; and, first, how wonderful a Thing Fermentation is, which separates all the gross Parts, and leaves a transparent, subtle, fluid Wine, which generates an almost stony Body, that does not dissolve in cold Water, whilst the Principles of this Body lie concealed in so thin a Liquor. This stony Mass, also, contains Water, a Spirit, and different Kinds of Oil, thick and copious. It is hard to conceive, how this Oil could lie concealed in the Wine, which seems to contain Alcohol indeed, but no such Oil: But, what is more surprising, the entire Mass of Tartar is merely acid, and makes an Effervescence with Alkalies, as we shall clearly see in the Preparation of tartarised Tartar; and yet, by the bare Action of no violent Fire, in a close Vessel, without any considerable Separation of an Acid, the greatest Part of its whole Bulk is changed from Acid to true Alkali; and this, perhaps, is the only Example, where a fixed alkaline Salt is produced in a close Vessel, by a moderate Fire, without the free Admission of the Air; whilst, in other Cases, only a black insipid Coal is thus produced. Who would have suspected, that a manifest Acid could, by this means, have changed to an Alkali? And if the acid Water, the Spirit, and the Oil, be poured back upon this alkaline Mass, from whence they were before extracted, and the Distillation be performed, as before, scarce any Acid will come over, and little Oil, but nearly the whole Mass will be turned into Alkali. Whence we see, that a large Quantity of a very acid Matter may be easily changed to an alkaline Substance; but, on the contrary, I am acquainted with no Instance in Chymistry, of such a manifest Change of a strong Alkali into an Acid: Whence I cannot sufficiently admire the particular Nature of this Tartar, as knowing nothing like it. The first distilled and highly penetrating Oil of Tartar is recommended for dissolving cold Tumors, and for restoring Motion to the dried tendinous Parts in contracted Limbs, together with the Assistance of proper Baths, Fomentations, and Frictions. If these Oils be rectified, and rendered more subtle and penetrating, they are recommended by Chymists, even for resolving gouty Knots and Concretions. It is said by many, that rich Perfumes may be exhaled by this Oil; but they, also, say, that decayed Musk and Civet may have their Scent invigorated, by being suspended in a Jakes. Salt of Tartar may be thus prepared in a greater Proportion to the Tartar employed, than by any other known Method; and in greater Plenty, the slower the Distillation was performed. This, also, is the best, sharpest, most penetrating and pure, of all the fixed Alkalies; nor is there any other known Body in Nature, that affords more of such a saline alkaline Matter, than Tartar. And if the black alkaline Matter, remaining after the most violent Distillation, be set by in the Retort, slightly covered with Paper, it wholly resolves into a Liquor, which, filtered, affords an admirable Oil of Tartar per Deliquium, extremely fit for numerous chymical Uses, and particular Operations. If the same Salt be first strongly calcined in an open Fire, it thus, also, resolves in the Air, and affords an Oil of Tartar per Deliquium, but of a more sharp and alkaline Nature, than the former.

### THE NATIVE SALT, OR TARTAR OF VEGETABLES, FROM THEIR FERMENTED JUICE.

1. The expressed Juices of ripe Summer-fruits, being perfectly fermented, and so become Wine, deposit their Faeces, or Lees, barely by standing, and thus become bright. If, now,

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this Wine be drawn into a clean Vessel, and suffered to rest for a long time, it produces in its Body little, shining, sharp Corpuscles, moving about therein. These Corpuscles, dispersing themselves from the Wine's Centre of Gravity to every Point of the Surface, at length touch, and fix themselves to the Sides of the Cask, and thus crust them all over, where-ever the Wine reaches. By degrees the Liquor deposits more of this Matter, which easily sticks to the former, whereto it seems to be attracted, till at length the whole Body of the Wine contains no more of it: After this, if the Wine, thus grown milder, be drawn off into another Cask, and fresh Wine, fined down as before, be put into the Cask that was emptied, but still remains lined with its Crust, the same Kind of Matter will be sooner generated, and grow to the former Crust, which more powerfully attracts it.

2. This appears to be the true Generation of that strange Production, which is the genuine saline Crystals of the Wine, tho' not, like other saline Crystals, found only in the Bottom, but equally all round the Sides of the containing Vessel. This Substance is, in many respects, different from the Lees of Wine, though it seems nearly of the same Nature; but it is more subtle, more pure, less earthy, less feculent, less unctuous, more difficultly soluble in Water, and of a more acid Taste. The *Germans* call it by a very proper Name, *Wine-stone*, but the *Chymists*, less properly, *Tartar*. There is a great Difference in it, according to the Nature of the Wine; the acid, austere Kinds whereof afford more; but the sweet and oleaginous, less. The Wines, that have their Fermentation stopped, before it was completed, afford a less Quantity; and those perfectly fermented, and become thin, a greater, as *Rhenish* Wine, for Example. The Tartar of Red-wine is red; and of White-wine, white.

## R E M A R K S.

1. This is a Way of obtaining the natural Salt of Vegetables; which Salt is always acid and oily. It is easily changed into an Alkali; it dissolves neither in Water, Wine, nor Vinegar, without Heat, but remains like a Stone therein; and, like a strong Vessel, contains within its Crust the Wine from whence it is shot. It requires a boiling Heat, before it will perfectly dissolve in Water; and then again, as soon as the Water begins to cool, it immediately begins to become solid in the Water, and is there called *Cream*, or *Crystal of Tartar*. It requires twenty times its Quantity of Water, to dissolve it perfectly. It generates more elastic Air in Burning, than any other known Body, and yields a Vapour that can no way be confined. It is a great Corrector in those Bodies, which abound with a sharp bilious putrid Matter; and hence becomes an approved Remedy in acute Diseases. It cleanses the first Passages, without much disturbing the more internal Parts. With a corrupt acrimonious Matter, it loses its Acidity, changes into a very soluble Substance, and hence becomes a good aperitive Remedy.
2. We may hence understand, what Salt that is, which resides in the natural or fermented Juices of Vegetables; but we shall shew, that these Salts, so generated, are easily resolved, by Art, into highly elastic Air, a tartish Water, a tartish and strong-smelling Spirit, an Oil the most volatile of any hitherto known, a gross and fixed Oil, a black alkaline Coal, an excellent Alkali, and an Earth. Salts, therefore, do not exist pure in Plants, but are always mixed with other Matters. And hence we may begin to understand the Nature of the chymical Analysis of Vegetables.

### THE PREPARATION OF TARTARISED TARTAR.

Reduce the purest white Tartar to fine Powder, and boil a sufficient Quantity thereof with ten times its Weight of Water, in a large copper Vessel, till the Tartar appears sufficiently dissolved; let the Vessel remain over the Fire, that the Water and the Tartar may continue constantly boiling; the Liquor, being now tasted, proves acid, and is almost transparent, and tolerably pure. Then let fall, from an Height, a Quantity of Oil of Tartar, Drop by Drop, into the boiling Liquor, which is still to be kept boiling, whilst the Oil of Tartar is dropped in. Upon the falling of each Drop, there arises a great Ebullition in the Liquor, proceeding from the Meeting of the Acid and the Alkali; as appears from hence, that the Ebullition, soon after, spontaneously ceases, and is raised again by dropping in more of the alkaline Liquor; and, because this is performed in a strong boiling Heat, large spherical Bubbles are generated on the Surface of the boiling Liquor, that presently crack, burst, and appear again. In these Bubbles Chymists have found, or rather imagined they found, the Figure of Grapes. The Operation is thus to be patiently continued, till at length no more Effervescence arises from dropping the alkaline Liquor into the boiling Lixivium. And now the Acidity of the Tartar will be so saturated with such a Quantity of its own Alkali, as neither to appear acid, nor alkaline, but a third new Salt: But this Point of Saturation must be exactly hit; otherwise the Salt will be acid, if too little Alkali were added; or alkaline, if too much: Great Caution must, therefore, be used at the End. This Liquor is to be strained hot and quick through Flannel, till it becomes clear; it will be of a thickish-



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blackish-brown Colour, of a particular bitterish, saline, unctuous Taste, but scentless; if inspissated by Heat, till a Skin appears on its Surface, and then set, for some time, in a cold Place, it deposits, to the Bottom and Sides of the Vessel, certain saline Grains, which, when collected, are a Tartar easily soluble in Water, even in the Cold; whereas before it could scarce be dissolved therein, without a boiling Heat: Whence this Preparation may properly be called *soluble Tartar*.

## R E M A R K S.

Tartar comes so near to a strong Hardness, as to remain insoluble in its own Wine, which is thus contained, as it were, in an earthen Vessel; whence the *Germans* appositely call it Wine-stone. It has a manifest Acidity; by the prevailing Force thereof it acts kindly upon the first Passages; and this Acidity is the Cause, that it makes so strong an Effervescence with its own fixed Alkali, which is so easily produced from it: For, after this Acidity is overcome by the Alkali, the Tartar becomes easily soluble, and a new Kind of Salt, which has a considerable Virtue in the Body, when taken upon an empty Stomach, dissolved in Water; for thus it deterges, and gently purges, and helps to cure many inveterate Diseases. Externally used, it cleanses foul Ulcers, and disposes them to heal: But whether this be the boasted Remedy of *Paracelsus*, by means whereof he declares he cured all fresh Wounds in a few Hours without Suppuration, I cannot tell. That Medicine he called *Samech*, which seems derived from a *German* Word, which signifies, *to conglutinate*. Thus much I can say, that a Solution of this Salt in Water is one of the best Menstruums hitherto known in Chymistry; as any one may learn, by boiling Gum Lac, Myrrh, and the like, therein. Whence he will find it can scarcely sufficiently be commended; and hence it is plain, that, used as a Medicine, it will dissolve viscous Matters in the first Passages; and it is even supposed to dissolve the tartarous Matter of the human Stone, generated in the Receptacles and Passages of the Bile and Urine, provided it be used plentifully every Day, the Dose being gradually increased. It is useful in the Stone, Jaundice, and hypochondriac Disorders. Lastly, the Examination of this Process shews, how proper Cream of Tartar is in all those Distempers, where the Bile in particular, and other Humours, putrefy in the Intestines, from a burning Fever, or other Causes, and thus become alkaline; for this Disposition is then corrected by the latent Acidity of the Tartar, and, at the same time, converted, in the Body, into a mild, aperitive, and soluble Salt, which opens the Passages, without greatly stimulating them, and removes Obstructions.

## REGENERATED TARTAR.

To a Quantity of sharp, pure, and dried, fixed Alkali, contained in a large Glass, with a narrow Neck, pour strong distilled Vinegar, till it almost covers the Salt; scarcely any sensible Effervescence will appear, which seems strange, because so strong an Alkali might be expected to make an Effervescence with the Acid; but it seems, on the other hand, as if so weak an Acid would not make an Ebullition with so strong an Alkali: Shake them strongly together, and then some small short-lived Ebullition appears. Pour on more distilled Vinegar, and then a greater Ebullition will arise, and appear sufficiently manifest; after shaking the Glass, add a third Quantity, and then a violent Ebullition, frothing and hissing, will be found, and prove the stronger, the more the Glass was shook; and this continues a long while, so that the Vinegar poured on makes the stronger Effervescence, the nearer the Operation approaches to the Point of Saturation with the Alkali; which Point is generally obtained, when about fourteen times the Weight of strong distilled Vinegar is added to the Alkali. Now, towards the End, let the Mixture be well heated, and long and strongly stirred, that no more Acid may be poured on, than is exactly required, to obtain the Point of Saturation; which will, at length, be hit, by continuing to add a little of the distilled Vinegar by degrees, and well agitating the Mixture, till the Addition, and shaking in of a little more, no longer causes an Effervescence, even in the Heat. Then let the Mixture stand warm, for twenty-four Hours; and if, upon shaking, it makes no Ebullition, again drop in a little Vinegar, and shake the Vessel; and, if now no Effervescence arises, then the exact Point of Saturation is hit. During the Experiment, the violent Effervescence throws off a very elastic Vapour, which bursts out of the Glass with an hissing Noise, after having been confined by pressing the Hand against the Mouth of the Glass, whilst it was shook, and then suddenly taking it away; and if the Orifice should be closely and strongly shut up, during the Effervescence, the Glass would be burst to pieces. The Liquor thus prepared is transparent, of a particular Odour, not acid, and of a Taste neither acid nor alkaline, but particularly Saline, and almost without Acrimony. It has a mild and innocent Virtue, though powerfully attenuating and resolving, being purgative, diuretic, and sudorific; whence it proves an admirable Remedy in chronical Diseases, attended with a tenacious Matter, being given in a proper Dose, at proper Seasons.

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The Liquor, being decanted clear from its Fæces, and distilled in a glass Alembic, affords a pure simple Water; whilst the Liquor remaining behind becomes of a brown or blackish Colour, and at length perfectly black, fat, thick, of an extremely penetrating, or, as it were, melting Taste, which discovers it to be of a saponaceous, penetrating; and resolving Virtue. Take a little of this Liquor, and mix it with a little Vinegar; when, if it yields an Effervescence, this shews, that the Alkali still predominates; and therefore the Whole must be again saturated, by the careful Addition of distilled Vinegar; and, as this usually happens to be the Case, the Point of Saturation is to be carefully and anxiously secured.

When at length this is happily obtained, let the Liquor be separated, by Rest, from its Fæces, and then all the Water be drawn off by a gentle Fire, till a saline Mass remains at the Bottom, of a black-redish Colour, and an highly penetrating, but very particular saponaceous Taste. This Mass will have attracted and retained all the Acid of the Vinegar, and given out all the Water. Mr. *Homburg* has laboriously shewn, that the Weight of the fixed Alkali is here increased Nine-twenty parts in respect of the Alkali, by the Acid of the Vinegar so attracted; and that this Acid, in respect of the Vinegar, was in the Vinegar about a thirty-seventh Part of the Whole; the other thirty-six Parts being pure Water. And thus the Salt is procured, which the Chymists call regenerated Tartar.

If the Salt, thus laboriously prepared, be urged with a strong Fire, it becomes volatile, and flies off into the Air. When carefully dried with a very gentle Fire, it appears like a Mass, that had strangely concentered, in the Cold, by the Apposition of little thin Plates, like Talc. It presently runs with Heat into a kind of a thick Oil, but again appears leafy in the Cold; and hence it has been called *Terra foliata*; and *Tachenius*, pretending it to be dissolved Talc, is reproved for it by *Zwelfer*, in his apologetic Discourse against *Tachenius*.

## R E M A R K S.

There is not in all Chymistry a more instructing Experiment, than this; it shews us a new, unexpected, and particular Appearance of Alkali and Acid in the making an Effervescence. We here see all the Degrees of Colour from the transparent Whiteness of Water, up to Blackness; we see, that a fat, inflammable Oil is regenerated from Alkali, calcined by a violent Fire, and a thin, hungry Spirit of Vinegar; for this dry Salt takes Flame in the Fire, and, when distilled with a strong Heat, affords a true Oil. Hence we learn, that Salts, produced by a Mixture of Acid and Alkali, are not barely made up of the Acid and Alkali, as they are again separable, but that a new Thing is produced, of which no Sign appeared before. We are taught what Proportion of Acid, and what Proportion of Water, is contained in an acid Liquor; what Proportion of Acid is required exactly to saturate an Alkali; and the true Manner of converting fiery fixed Alkali into a mild, compound, volatile, saponaceous, oily Salt. This Salt, when properly prepared, is a most admirable Menstruum, converting its Subject, by Mixture and Digestion, into an uniform, soluble Mass, that will readily pass through the Body, and remain rich in its own Virtues. It is the greatest Resolvent in the Body hitherto known, and therefore highly valuable, as it is not hurtful in hot Cases, yet serviceable in cold ones, and almost suited to every Patient. Upon carefully considering all these Particulars, I have often doubted, whether this were not *Helmont's* volatile Salt of Tartar, which he so highly commends, and substitutes for the Alcahest itself, especially since it flows like Wax in the Fire. It seems certainly to be the *Acetum radicum* of the ancient Chymists, as in its Preparations Vinegar returns, and is joined with its own Matrix of calcined Tartar. But whoever shall over-carefully endeavour to dissolve, purify, filtre, inspissate, or calcine this Salt, in order to make it white, he will find it fly off into the Air, and be lost; and may thus indeed be convinced of its Volatility with the Loss of his Labour and Cost. And this Admonition I give, principally because *Sennertus* recommends a scrupulous Diligence in purifying this Salt; which is not only a Loss, but an impoverishing Labour.

## TINCTURE OF TARTARISED TARTAR.

Reduce dry tartarised Tartar to fine Powder; put it into a tall Bolt-head, and pour pure Alcohol thereon, till it rises four Inches above it. Stop the Glass with Paper, and boil with a gentle Heat, for twenty-four Hours; by which means the Alcohol will become of a gold Colour, and of an aromatic, hot, penetrating Taste. If the Operation be repeated with fresh Alcohol, a white Salt will remain at the Bottom. Let the Tinctures be inspissated with a gentle Fire, till a tenth Part remains condensed behind.

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The Tincture thus prepared is aromatic, heating, cleanses Ulcers, and heals up Wounds; the remaining Salt is purer, and more simple, than before; which shews that Salts may be whitened, by drawing a Tincture from them with Alcohol.

### THE DISSOLUTION OF REGENERATED TARTAR IN ALCOHOL.

Put regenerated Tartar prepared as above, and made as dry as it can be with Safety, into a tall Bolt-head; pour thereon six times its Quantity of pure Alcohol, and boil them carefully with a gentle Fire; they will thus be united into an uniform compound Liquor, that deposits some Faeces at the Bottom; which being subsided, let the Liquor be poured off pure. And, if any Salt remain undissolved behind, add fresh Alcohol, and proceed as before. Lastly, distil the Liquors with a gentle Fire to one half; and thus the Tincture or Solution of regenerated Tartar will be obtained.

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We have here the Alkali, the oily Acid, and the oily Spirit, of vegetable Subjects united together; whereby the most active Principles of Plants are freed from their indolent Earth, and yet remain safe, or not dangerous on account of their Acrimony. This Mixture, also, seems to be the lesser Elixir of the Philosophers; which the ancient Chymists commended for restoring Health. Certainly, it dissolves almost all Obstructions, penetrates the Vessels, agreeably stimulates the vital Faculties, and cures by Sweat. It is, also, a most excellent Solvent in Chymistry, whereby Bodies are dissolved into their smallest and most active Parts, without impairing their seminal Virtue; so as to gain them Entrance into the innermost Recesses of the Body, in order for conquering the most obstinate Distempers. It is no less serviceable, when externally used in Wounds, Tumors, and Ulcers. And, that the Poor may not want so excellent a Remedy, it may be directly prepared by mixing Pot-ashes with fifteen times their Weight of strong Vinegar; then straining and inspissating the Solution; and thus without less Labour, or great Expence, a Medicine may be easily prepared for Use. This Medicine was known to the ancient Romans, and is mentioned by Pliny in his Preface, where he says, *The Ashes of Vine-twigs, being dissolved in Vinegar, are drunk in Diseases of the Spleen.*

### HARVEY'S TINCTURE OF SALT OF TARTAR.

Take the black alkaline Salt, remaining in the Retort after the strongest Distillation of Tartar; reduce it to Powder, in an hot iron Mortar, with an hot Pestle; and immediately put it into a tall Bolt-head; pour the best common Spirit thereon, so as to rise four Inches above it; boil with a gentle Fire for twenty Hours; and thus a black, thin, bitter, aromatic, lividous Liquor will be obtained; which, being decanted pure, may long be preserved perfect in a close Glass for Use, under the Title of *Harvey's Tincture of Salt of Tartar.*

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The common Spirit consisting of Water, Acid, and Alcohol united, coming to boil with the Alkali of Tartar, that still remains oily, makes a mild and safe Livivium; the Alkali being here tempered by the Acid, Oil, and Alcohol: Whence we have a noble kind of Medicine and Menstruum; wherein if Vegetables be boiled or digested, it dissolves them to good Advantage. In Surgery it is an excellent Remedy for cleansing, deterging, drying and healing all weeping, purulent, putrid, sinuous, and virulent Ulcers, as well the fistulous, as the sinuous, and burrowing; and, also, for consuming proud Flesh; especially if artificially mixed with a little Oil. It has similar Effects, when used internally, in Distempers where acid, austere, aqueous, mucous, or terrestrial Matters and Coagulations abound, provided they be not attended with a putrid Dissolution of the Humours: And hence it is commended in old Obstructions of the Viscera, Collections of Water, dropsical Dispositions, the Green-sicknets, Jaundice, and cold Gout. It acts strongly as a Diuretic, a Diaphoretic, and sometimes, as a Purgative; and may be safely given in a large Dose. Two or three Drams thereof, being mollified with an Ounce of the Syrup of the Five opening Roots, and diluted with Fennel-water, will have a very good Effect, being taken in a Morning fasting, and repeated three or four times at due Intervals, or a better than most other Remedies. Hence the famous Dr. *Harvey* deservedly recommends it; though the ancient Physicians, also, were not unacquainted with the like for the same Purposes, as may appear from *Dioscorides*.

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## HELMONT'S TINCTURE OF SALT OF TARTAR.

Take the black Salt of Tartar, remaining upon the Distillation of Tartar; put it into a large and strong Crucible; burn and calcine it well in the Fire, with Care to prevent the Coals, or other Matters, falling into it, till it becomes white, and all its oily Matter be consumed. Or, to make more Dispatch, take a Parcel of the best Tartar, and tie it up in Cap-paper, first made a little moist; then put it into the Fire, and surround it every-where with live Coals, and let the Fire at last go out of itself; then removing the hot Ashes, an alkaline saline Mass will be found run together at the Bottom; this is called common Salt of Tartar. Let either of these Preparations be dissolved in Water, filtered and exhaled away in a clean iron Pot; and let the Salt be afterwards calcined, and reduced to fine Powder, the finer the better; this will be excellent Salt of Tartar. Then have ready at Hand a tall and dry chymical Glass, with a wide Mouth, One-third full of pure and warm Alcohol; let, also, the whole Neck of the Glass be well heated all round, lest it should burst by the Heat of the Salt of Tartar, to be now presently poured in; fit a Paper Funnel to the Mouth of the Glass; and through this pour the Powder of the Salt of Tartar now extremely hot, as it comes from the Fire, and therefore dry, into the Alcohol. If all these Particulars are rightly observed, the Salt will fall into the Alcohol, with a great Hissing and Noise, and immediately cause an Ebullition. When a sufficient Quantity of Salt is put in, stop the Glass slightly with a Cork; and, when all is cold, pour in more Alcohol, till the Glass be Three-fourths full; shake them together, so that no Salt may hang on the Sides of the Neck of the Glass; but all of it remain entirely under the Alcohol: Otherwise these adhering Particles of Salt would dissolve by the Moisture of the Air, then mix themselves with the Alcohol, and frustrate the whole laborious Operation. Let the Glass now be set in an Heat of an hundred Degree, and be often shaken, and lightly stopped, to exclude the Moisture of the Air, which is here so prejudicial. The Liquor will thus soon become of a deep and beautiful red Colour, and contain the manifest Virtue of the alkaline Salt, as appears by the Smell and Taste, though scarce by any Effervescence; but especially if it be very cautiously inspissated by Distillation; for, being afterwards examined, it is found manifestly saponaceous, and somewhat saline. If the least Particle of Water be mixed with either Ingredient, no Tincture will be obtained; but the Alcohol remain colourless, and transparent upon the Alkali, how long soever they stand together. And thus even the lightest Sign of Moisture will, also, appear: Whence I do not wonder to find, that some eminent chymical Authors have wrote, that this Tincture was impossible; for it cannot be made, if any one, even of the slightest Circumstances here required, be omitted. And as to what other Professors of the Art have wrote, that the Colour, by our Method communicated to the Alcohol, should be owing to a spontaneous Change thereof in time; this is confuted by the Experiment, and the Marks above described: But it is easy to mistake in so laborious and difficult an Experiment. I have not found the Tincture alkaline; but rather of a compound, saponaceous Nature.

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This Experiment, again, shews, that pure fixed Alkali has an Appetite of attracting almost all Liquids to itself, whenever it exits by itself. Thus it greedily drinks in Water, Acids, and Oils, and Alcohol, also, though not so strongly, or so closely, as the former. Hence we have a new Method of making an extremely subtle Soap of Alkali and Alcohol; for this Tincture is truly saponaceous, as appears by rubbing it between the Fingers, where it has a manifest detergent Property, in an high Degree; while pure Alcohol, thus treated, would manifest itself only by Drinels. It shews itself to be flame and fiery by its Taste; it does not, indeed, make a manifest Effervescence with Acids, or readily precipitate Bodies dissolved therein. If the pure Tincture be inspissated by Distillation, it leaves a saline, saponaceous, scarcely alkaline, but sharp, coagulated Substance at the Bottom, of a deep-red, or almost black Colour. As a Menstruum, it incomparably dissolves all distilled Oils with great Expedition and Perfection; it, likewise, extracts excellent Tinctures from Gum Lac, Myrrh, and Amber: It is recommended by the Chymists for internal Use, against Distempers arising from a stubborn tartarous Matter; but, to say the Truth, it cannot be given, unless diluted with Water, Wine, or the like mild Liquor otherwise; it instantly burns the Parts it touches; and, when weakened, as it requires, to what Purpose was all the Pains taken to purify the Alcohol, and unite it with the Alkali?



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Alkali? I judge, therefore, that *Harvey's* Tincture of Salt of Tartar affords a more excellent Medicine, with much less Trouble. The present Operation, however, is by no means useless; for it teaches many Particulars, some whereof are mention'd above.

I have long considered upon that casual Saying of the great *Helmont*, that, if Spirit of Wine be distil'd from thoroughly calcined Salt of Tartar, one half of it will be turned to Water. This I understood of Spirit only once rectified; especially, because, in another Place, he says, the same thing happens with Vinegar. But, because the principal Followers of *Helmont* declare, that we are to understand this Saying of pure Alcohol, one half whereof is joined to Salt of Tartar, whilst the other is turned to Water, and, therefore, that true Alcohol consists of these two separable Parts; and, also, that the Salt of Tartar is thus, also, converted into that noble Balsam, or *Samech*, of *Paracelsus*, which miraculously heals Wounds, without any Inconvenience; I judge proper here to declare, what I have myself found with great Labour. I made a perfect Tincture of the Salt of Tartar, in the manner above described; it was extremely strong, red, and fragrant, and of a sharp, fiery, and almost alkaline Taste: I digested it upon its Alkali for many Months, then set it by four Years; the Salt continued extremely dry at the Bottom, and the Tincture exceeding red above it: I then poured out all this Salt, and the Tincture, into a perfectly dry and clean glass Body; they were extremely fragrant. I distilled off all the Alcohol with a gentle Fire, having exactly luted the Junctures; the Alcohol was perfectly limpid, subtle, and fragrant; the Salt at the Bottom was now of a purple Colour, tho' it was white before; I poured the Alcohol upon its Salt, and distilled as before; the Alcohol now rose with more Difficulty, and a saline red Mafs remained behind; the Alcohol was of a fiery Taste: I thus continued to cohobate it for one-and-twenty times, after which a black saline Mafs remained at the Bottom, and the Alcohol came over exceeding sharp; in the last, I urged this black alkaline strong-smelling Mafs with the greatest Heat that Sand could give; upon which there came over, not Alcohol, but Water, tho' I had with the utmost Care prevented any Water from getting in. And thus I found, that Water might be obtained from this Salt and Alcohol, but, not half the Quantity in respect of the Alcohol; and still I have some Doubt, whether this Water did not proceed from the Air, or was not secretly taken up upon returning, and distilling the Alcohol so many times over: This I am certain of, that the Alcohol thus first put to digest with the Salt of Tartar, for so many Months, and afterwards left for some Years therewith, then drawn off from it two-and-twenty times, did not make this Salt volatile, but left it fixed, and perfectly black. Having now broke the Vessel, and taken out all the Salt, I exposed it, in a hollow Glass, in a Cellar, where it ran into a brown Liquor of a sharp alkaline Taste, which I reserved by itself. This Labour I undertook, that I might at length be certain of the Nature of Salt of Tartar, and of the Conversion of Alcohol into Water by its means; the Union of Alcohol with Salt of Tartar, by distilling it therefrom; and the volatilizing of Salt of Tartar, by means of Alcohol: And hence we see what the great Promises made about these Matters end in. The Alcohol, so many times cohobated, was extremely clear, fragrant, of a fiery Taste, would burn away without leaving any Faeces, and made no kind of Effervescence upon the Addition of Acids; and this was the Reward of my Labour.

### TARTARUM VITRIOLATUM.

#### *Vitriolated Tartar.*

1. Take three Ounces of pure Oil of Vitriol; dilute it with thrice the Quantity of warm Water, in a tall capacious glass Body, with a narrow Neck; add to it, Drop by Drop, a Quantity of Oil of Tartar *per Deliquium*, till the Point of Saturation is perfectly obtained; otherwise a pernicious Acrimony, either acid or alkaline, remains. In this Experiment a violent Effervescence will arise; and a white Salt begin to appear at the Bottom, long before the Saturation is completed. After this Point is found, shake the Vessel for a considerable time, and taste the Liquor: If it tastes neither acid nor alkaline, take a little thereof, and heat it; divide it into two Parts; and to one add a Drop of Oil of Vitriol, and to the other a Drop of Oil of Tartar *per Deliquium*; and, if no Effervescence appears in either, the Point of Saturation, here so requisite for medicinal Use, is exactly hit. If any Effervescence arise upon the Addition of the Acid, the Alkali prevails; and, if the Alkali causes any Effervescence, the Acid prevails; but, when the Equilibrium is obtained, let the Liquor be entirely dissolved by the Addition of hot Water, so that all the Salt may be taken up. Let the Liquor be strained while it is hot, evaporated to a Pellicule, and crystallized. A white Salt will be obtained, of a neutral Taste, that requires a large

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Proportion of Water to dissolve it: What remains cannot be crystallized; as happens in the Case of Nitre, Sea-salt, and almost every other Salt:

2. Some eminent Chymists, among whom we reckon *Tachenius*, imagine that the Oil of Vitriol, after having suffered so great a Fire, carries up with it some volatilized metallic Parr, that gives a noxious Quality to this Salt, not to be easily destroyed: Hence they endeavoured to obtain this Acid native and simple, without Fire, and join it with fixed Alkali of Tartar. They, therefore, dissolved Vitriol in Water, so as to make a dilute and pure Liquor, to which, when filtered, they added Oil of Tartar *per Deliquium*, Drop by Drop; upon which the Liquor grows turbid, and the Iron, in form of yellow Oker, falls to the Bottom: They carefully proceed thus, till no more Precipitate is obtained, upon Addition of the Alkali. This Point they carefully observe, and set by the Mixture, till all the metallic Faeces are precipitated; then filtre the pure Liquor, inspissate and crystallize as before. Thus a *Tartarum Vitriolatum* is obtained without Fire; and, as they seem to imagine, without any Suspicion of a sharp corrosive Virtue; and if there be no blue, or green Colour remaining in the Liquor, or the Salt prepared from it, the Preparation will be good; but otherwise it will retain something of Copper, and prove malignant.
3. When, by the like means, a Salt is prepared with any pure volatile Alkali, and Oil of Vitriol, either alone, or diluted with Water, a like, but a semi-volatile and more penetrating Salt is obtained; whereas the former is wonderfully fixed. This Salt, in whatever manner prepared, appears considerably ponderous and solid; and, yet at the same time, is mild and opening.

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The Virtue of this Salt is esteemed highly opening, if taken upon an empty Stomach, diluted with Broth or Whey, and assisted with the Exercise of the Body; for thus, by attenuating, resisting Putrefaction, and stimulating, it opens the obstructed Viscera, so as to have acquired the Name of the universal Digestive; but *Tachenius* calls it an unmetallic Vitriol. It appears from various Chymical Processes, that the most corrosive Alkalies and Acids grow perfectly mild upon mixing together. Whence we learn, that two Poisons, as they would prove, if taken separate, may be render'd innocent, if drank mixed together; or even that one may be corrected by taking the other soon after. Hence, also, we see, that Water may lie wonderfully concealed in Salts, and at length be set free from them; for the acid Spirit of Nitre contains sixty Parts of Water, to nineteen of true Acid: Spirit of Salt holds fifty-two Parts of Water, to thirteen of Acid; and Oil of Vitriol sixty of Water, to thirty-seven of Acid; even supposing all these Liquors highly rectified: So large a Quantity, therefore, lay concealed in decrepitated Sea Salt. And hence we learn, that there are but very few simple fossil Acids; as the Acid of Alum, Vitriol, and Sulphur, is the same; Aqua-fortis, and Spirit of Nitre, have no Difference; and the Spirit of Sea-salt, salt Springs, and Sal Gem, are all the same. *Boerhaave's Chymistry.*

TARTON RAIRE. The same as the *Sanamunda*. See THYMELÆA.

TATAIBA *Brasilensis*, Marg. & Pison. *Stve Arbor bacifera Brasilensis, fructu Tuberculis inaequali, Mori amulo.*

A Tree growing in *Brasil*, of an ash-colour'd Bark, and a croceous or reddish Wood; the Leaves are acuminate and serrated, resembling, in some measure, the Leaves of Birch. The Fruit is of the Size of a moderate Mulberry, round, and composed of Tubercles of a pale Colour, with many Filaments on the Outside, which are of a dark-brown Colour, and not very long: This Fruit is eaten, as Mulberries are, either alone, or with Sugar and Wine; it contains within it small whitish Grains dispersed through the Pulp.

The Wood of the Tree is extremely hard, and lasts a very long time, as well in Earth, or Water, as without them, being always green. It is the best of all Woods, and excels that of the *Masarandiba*, in what manner soever it be used. Of the old Wood they prepare a Tincture of a very fine yellow Colour. The Tree grows every-where in the Woods, especially in maritime Places; and the Fruit is ripe in May. *Raii H. P.* 1639.

TATARIA, *Hungarica edulis, Panacis Heraclei folio, semine Libanotis Cachryophoræ.* J. B. *Panaci Heracleo similis Ungarica.* C. B. *Panaci Heracleo similis Tataria Ungarica dicta.* Park.

This is no common Plant, but has a very long and thick Root; for *Clusius* tells us, that he was presented with some of the Roots, which were as thick as a Man's Arm, and a Cubit or more in Length, by the noble *Balthasar de Bathyan*, who had order'd them to be brought from Hungary beyond the Danube, on his Account, that he might plant them in his Garden at Vienna. They produced Leaves not much unlike those of Turneps in their Jags and Incisures; but shorter, and in Shape more



resembling those of the Panax, cover'd with a rough lanuginous Substance, and of a palish-green Colour; after these were produced other Leaves with smaller Jags, but no less rough, from the Middle of which arose a striated, concave, and nodous Stalk to the Height of a Cubit, or more, as thick as a Man's Thumb, and as rough as the Leaves, and set with lesser multifid Leaves on broad Pedicles, and cover'd, also, with a rough woolly Substance; the Top of the Stalk expanded into an Umbrella, resembling that of the *Panax Heracleus*, on which are the Flowers equal in Shape and Colour, and succeeded by a few scattering Seeds (for all the Flowers are not fruitful) very thick, and not much unlike the large striated Seed of the *Libanotis Cuchryophora*. *Clusius* had the Root two Years in his Garden, before ever a one of them produced a Stalk and Seed; after which they putrefy'd, and exhaled so noisome a Smell, that he was obliged to throw them away.

The *Hungarians* who live about *Agria*, and also, those who border upon *Walachia* and *Moldavia*, in a time of Dearth, make use of the Roots for want of better Bread; as *Clusius* was assured by the aforesaid Nobleman, and other Persons of Quality, who lived in that Country. *Raii Hist. Plant.* 424.

TATIL. The Name of an extremely minute *American* Bird; I suppose the same as that call'd the Humming Bird. I don't know that it is of any Use in Medicine.

TATURA. The same as DATURA.

TAUROCOLIA. Glue made of the Ears and Genitals of Bulls. This Sort of Glue was esteem'd the best.

TAURUS. The Bull. See Bos.

TAXUS

The Characters are;

The Leaves are broader, thicker, and blunter than those of Juniper, and disposed like the Teeth of a Comb. The Flower is amentaceous, consisting of a squamous Calyx, from whose Centre arises one Style, furnished with a Multitude of Testiculi or Apices shaped like a Mushroom. The Fruit grows on the same Plant with the Flower, but in a different Place, and is pulpous, bellied, and hollow like a Pot, or shaped like an Acorn, and containing one Seed.

*Boerhaave* mentions three Sorts of *Taxus*; which are,

1. *Taxus*. *Offic. Ger.* 1187. *Emac.* 1370. *Raii Hist.* 2. 1416. *Synop.* 3. 445. *J. B.* 1. 241. *C. B. P.* 505. *Tourn. Inst.* 589. *Boerh. Ind. A.* 2. 208. THE YEW-TREE.

This Tree grows in mountainous and rocky Places, and is commonly found in the Western and Southern Parts of *England* in hilly Woods and Hedges. Our Ancestors planted Yew-trees in Church-yards, on account, it is supposed, of the everlasting Greenness of its Leaves, which was a Symbol of that Immortality and eternal Life, to which they expected the dead Bodies there deposited would arise, at the general Resurrection. The Antients, and many of the Moderns, have affirmed, that the Fruit of this Tree is destructive and deadly. *Dioscorides* writes, that those who eat the Berries are seized with a Flux of the Belly; and elsewhere he says, that the *Taxus*, taken inwardly, induces a Coldness of the whole Body, Suffocation, and speedy Death. *Caspar, Lib. 6. de Bell. Gall.* writes, that *Catonius*, King of the *Eburones*, killed himself with drinking the Juice of the *Taxus*. Some there are, says *Pliny*, who tell us, that from this Tree the poisonous Juices, with which the barbarous People tinged their Arrows, were called *Taxica*, though now *Toxica*. But *Pollux* and *Joh. Badius* shew, that the *Toxicum* was another Kind of Poison, with which they anointed their Arrows, that Wounds from them might prove mortal: *Toxicum*, therefore, is so called from *Toxon*, *τοξον*, a Bow. *Matthioli* affirms, that, in the Mountains of *Trent*, not only Horses, and other Beasts of Burden, but ruminating Animals, have died with eating of the *Taxus*; and that Shepherds, and Cutters of Wood, have been seized with burning Fevers, and a Flux, from eating the Berries, to the great Hazard of their Lives. *J. Bauhine*, also, tells us, that he has been assured by Persons of good Credit, that, in the Mountains of *Burgundy*, Oxen and Cows have died with eating the Leaves and Bark of this Tree. And *J. Lutz*, an Apothecary of *Kirchheim*, told him, that a white Turtle-dove, with a black Collar, which he kept in his House, died with eating the Berries; and that, in the Village of *Oberentzingen*, an Ass died suddenly, after eating of the *Taxus*.

On the contrary, we are of Opinion, that the *Taxus* is unjustly blamed, since *Label* assures us, that Children in *England* use to feed on the Berries, without any ill Effects; and that he had tasted them himself, towards the End of the Autumn; and that they had no disagreeable Taste, only maukish and bitterish; and that the Swine were fed upon them as freely as on Acorns. Our Countryman *ticard* relates, that both he himself, and great Numbers of his Schoolfellows, had often eaten of the Berries to Satiety, and had slept not only under the Shade, but on the Branches of the Yew-trees, without the least Inconvenience. *Camerarius* holds the *Taxus* to be harmless; that its red Berries are greedily coveted by the Birds, who are stupefied by them, in such a manner as to be easily taken. Either, therefore, the Antients are mistaken in the Accounts they give us of the *Taxus*; or the Constitution of the Air, or Condition of the Soil, have occasion'd this Difference

in its Quality. The Tree, I confess, is of a sad Green, and its melancholy Aspect, if I may so say, seems to indicate some malignant Quality belonging to it; and at the time it is in Flower, and most pregnant with Juice, it may, possibly, be noxious to Cattle: However, I affirm nothing; for the Antients themselves do not talk very consistently, about the noxious and deadly Qualities of this Tree. *Theophrastus* writes, that some Persons eat the Fruit without Harm; and that the Leaves are mortal to labouring Beasts, but not to ruminating ones. *Plutarch* says, it is hurtful only when it begins to be in Flower. And *Dioscorides* gives a Hint, that it is not every-where deadly and poisonous, when he says, that the *Taxus* in *Italy*, and the Southern Parts of *France*, is mortal; that of *Italy*, with its Berries; and the other, with its very Shade. It is strange, that Birds, which eat of the Fruit of the *Taxus*, should turn black: And we learn from *Virgil*, that this Tree is prejudicial to Bees. Of old the best Bows were made of the Wood of the *Taxus*, which is still highly valued by Joiners, Turners, and other Artificers in wooden Work.

*Evelyn* speaks of another Species of *Taxus*, in the Garden at *Pisa*, whose Leaves are more like those of the Fir-tree, and the Tree thicker of Leaves and Branches; being clothed with Leaves from the very Root upwards, and so thick-set with Boughs, and small Branches, as to appear rather like an Hedge than a Tree, though it be, also, very tall. This Tree is supposed, by *Evelyn*, to be the deadly *Taxus* of the Antients, because *Bellucci*, the Keeper of the Garden, affirms, that the Gardeners, who sometimes clip the Tree, are not able to continue at their Work above half an Hour at a time, by reason of a very severe Pain in the Head, excited by the noxious and poisonous Smell, emitted from it while under Cutting. *Raii Hist. Plant.*

2. *Taxus*; Folio latiori, magisque splendente.

3. *Taxus*; Foliis variegatis. *H. R. Par. App.*

The Wood is very elegantly coloured, and used to make Walking-staves. The Berries eaten induce a Dysentery and Fever. This was a very noted Tree among the Antients, for its deleterious Quality, which proved mortal, as it was pretended, to all who took it. But though it was formerly accounted a poisonous Plant, we are now-a-days better informed, and cultivate it every-where, for the sake of Ornament, in Gardens. *Hist. Plant. adscript. Boerhaav.*

*TAXUS* is, also, a Name for the Badger; which is thus distinguished by Authors:

*TAXUS*. *Offic. Schrod.* 5. 308. *Schw. Quad.* 130. *Ind. Med.* 115. *Aldrov. de Quad. Digit.* 264. *Jonst. de Quad.* 101. *Taxus etiam Daxus*. *Charlt. Exer.* 18. *Taxus suillus, Meles*. *Mer. Pin.* 168. *Taxus sine Meles*. *Raii Synop. A.* 185. *Meles*. *Gesn. de Quad. Digit.* 686. THE BADGER.

The whole Animal incinerated, its Blood, and its Fat, are applied to medicinal Uses. The Ashes of the burnt Animal are exhibited with Success in pulmonic Disorders, and an Haemorrhoe. The Blood, pulverized, is said to be good for the Leprosy; and the same, distilled, to be effectual against the Pestilence. The Fat, as it is a little thicker, so it is somewhat hotter, and more efficacious, than the Fat of Swine: It gives Relief under Pains of the Kidneys proceeding from the Stone, mitigates the Heat of Fevers, and restores Contractions and Weaknesses of the Joints and Nerves. *Schroder.*

TEAPHIN. This Word occurs in *Nicolaus Myrepsus, Sec.* 12. *Cap. 27*. It is mentioned as an Ingredient for a Fumigation, in Disorders of the Anus. The Word is utterly barbarous; and *Fuchsius*, his Commentator, confesses, he don't understand what the Author means.

TECMARSIS, *τέκμαρσις*, from *τεκμαίρω*, to indicate, of *τέκμαρ*, a Sign, is a Word used by *Hippocrates*, in the Beginning of his Book *de R. V. I. A.* importing a judicial Knowledge, or a Judgment founded upon determinate and necessary Signs. This Way of judging is syllogistic, or rational, and much in Use among Philosophers as well as Physicians. It comprehends the *γνώσις*, *διδωγμένης*, *πρόβλεψις*, and *δεσπότης*, and, consequently, almost the whole Art of Medicine, which depends on artificial Conjectures, or Judgment formed according to the Rules of Art; as sufficiently appears from those Words of *Hippocrates*, in the Book before-mentioned, *ὁδὸν δ' εἰς τέκμαρσιν λέγουσι ὡς γρηῃ ἕκαστα ἰντραπύειν*. But since we must come to a *Tecmaris* [Judgment formed upon Indications] for the Management of particular Cases, &c. And just before, *ἡ ἐπικρατεῖα ἐν τῇ ἐκείνῃ εἰς τέκμαρσιν*, And some Things well accommodated to a *Tecmaris*. Here *Galen* explains *τέκμαρσις* by *ἡ διὰ τέκμαρσις γνώσις*, Knowledge acquired from a Sign, that is, from the proper Signs, or distinguishing Characters, of Things, or from necessary and perpetual Signs, which are called *syllogistic*.  *Erotian*, on *Hippocrates*, expounds *τέκμαρσις* by *συνέκτασις*, A Knowledge acquired by Signs, with an Eye to the above-quoted Places: He, also, says, that *τέκμαρ* and *τεκμήριον*, in *Hippocrates*, are ἰδίως τὸ σημεῖον, properly a Sign.

*Tecmar*, *τέκμαρ*, though expounded, in *Hesychius*, by τὸ πᾶρας ἡ τιλῶν. A Limit and End, and though *Aristotle, Lib. 1. Rhetor.* says, that *τέκμαρ* and *τεργς* *Peras* are the same thing in the antient Language, yet it is to mean a Sign in *Hippocr.* *Lib.*



*Lib. 2. περί γυναικ.* where it is said, ἄλλοι δ' ἄλλῃ πῇ τέκμαρ ἴσῃ, *In others the Sign is contained in some other Part*: For he seems to intend, that the Signs of the Disease are various in different Subjects. Some, however, understand by τέκμαρ the End, and then the Sense of the Quotation will be, *In some Women the End (of the Disorder) is observable in a different Part.* For as he had before told us, that a Fit of the Hysterics induced, at least, a great Heaviness and Oppression of the Head, so here he intends to say, that sometimes the Disorder ends with some ill Effects on a different Part.

**TECMERION**, τεκμήριον. How it differs from σημεῖον (*Se-me-ion*), we are taught by *Galen, Com. 3. in Prognost.* where he says, that Συλλογιστικὸν Σημεῖον, *A syllogistic (rational, or such as give Room for Ratiocination) Sign* was by the Antients called τεκμήριον.

**TECOLITHOS**, τηκόλιθος. A Name for the *Lapis Judaicus*.

**TECOMAXOCHITL**. The Mexican Name for a Sort of Bastard *Apocynum*, called *Gelsemium Hederaceum Indicum Cornuti*. *Gelsemium Indicum maximum flore phæniceo*. Ferrar. *Pseudo-Apocynum Virginianum, alias Gelsemium maximum Americanum flore phæniceo*. Park. It is not used in Medicine. *Rail Hist. Plant.*

**TEGANITES**, τησανίτης, from τήσανον, a Frying-pan. An Epithet for Bread, importing its being tried in a Pan.

**TEGULA HIBERNICA**. Irish Slate. It is thus distinguished:

*Lapis Hibernicus*. Offic. Mer. Pin. 213. Dougl. Ind. 50. *Lapis fissilis Hibernicus*. Charlt. Foss. 16. *Tegula Hibernica*. Full. Pharm. Ext. 281. *Ardesia Hibernica, Tegula Hibernica*. Ind. Med. 57. **IRISH SLATE**.

It is a fossil Stone, of a black Colour, somewhat inclining to an Azure, and of an earthy Taste; and found in Mines, as well in England as Ireland.

This Stone is frequently used in Contusions; for it resolves coagulated Blood: Some say it is effectual in Quartan Fevers; but it is of excellent Use in all Kinds of Hæmorrhages, uterine Fluxes, and Spitting of Blood. *Dale*.

**TELA ARANEI**. A Spider's Web. See **ARANEUS**.

**TELAMONES**, τελαμώνες. Lint, applied to Wounds; or the Fillets with which Bandages are made.

**TELEPHIOIDES**. Bastard Orpine.

The Characters are;

It hath a Rose-shaped Flower, consisting of several Petals, which are constantly placed in a circular Order; from whose Empalement rises the Pointal, which afterwards becomes a roundish Fruit, divided into six Cells, each containing a single Seed, of the same Form with the Cell.

*Miller* mentions five Species:

1. *Telephioides Græcum, humifusum, flore albo*. *Tourn. Cor.* Low trailing Greek bastard Orpine, with a white Flower.

2. *Telephioides Americanum, erectum, folio ovali subtus glauco, flore herbaceo*. Upright American bastard Orpine, with an oval Leaf, which is of a Sea-green underneath, and an herbaceous Flower.

3. *Telephioides Americanum, arborescens, fructu parvo, foliis acuminatis*. *Houft.* Tree-like American bastard Orpine, with a small Fruit, and pointed Leaves.

4. *Telephioides Americanum, arborescens, foliis latis, subrotundis, & subtus incanis, fructu maximo*. *Houft.* Tree-like American bastard Orpine, with broad roundish Leaves, which are hoary underneath, and the largest Fruit.

5. *Telephioides Americanum, arborescens, foliis latioribus subrotundis, fructu majore ex longo pediculo pendulo*. *Houft.* American Tree-like bastard Orpine, with broader roundish Leaves, and a larger Fruit hanging on long Foot-stalks.

The first Sort was discover'd by *Tournefort*, in Greece; who constituted this Genus, giving it this Name from the Similitude there is between this Plant and the true Orpine of *Imperatus*: This is a low trailing Plant, which seldom continues more than two Years.

The second Sort grows in *Barbadoes, Jamaica*, and several other Places in the *West-Indies*.

The third Sort was discover'd by the late Dr. *Houfflon*, at *La Vera Cruz*; from whence he sent the Seeds into England. This Sort rises to the Height of eight or ten Feet, having a woody Stem; the Leaves are branched into many Wings, and the Flowers, which are small, and of a whitish-green Colour, grow on the under Side of the Leaves, and are succeeded by small Fruit, which hath not as yet ripened in England.

The fourth and fifth Sorts were discovered by the late Dr. *Houfflon*, at *Campechy*; where they grow to the Height of twelve or fourteen Feet: The Leaves of these Kinds are broad, and come out alternately on the Branches. The Fruit of the fifth Sort is about the Size of a small Nut, and is produced on the under Side of the Leaves, hanging on very long Foot-stalks. The Fruit of the fourth Sort is as large as Walnuts, and hath hard woody Coverings, or Shells. *Miller's Dictionary*.

**TELEPHIUM**.

The Characters are;

The Leaves are alternate, the Calyx is polyphyllous, and the Flower resembling that of the *Helianthemum*: The Fruit is triangular, unicapsular, and full of roundish Seeds.

*Boerhaave* mentions but one Sort of *Telephium*; which is the *Telephium*; *Dioscoridis. Imperat. 665. Polygonum, perenne, procumbens, folio brevior, floribus in capitulum congestis* M. H. 2. 592. *Sedum, procumbens, rotundifolium, glaucum, purpurascens floribus*. M. H. 3. 474. *Boerb. Ind. alt. Plant.*

This Plant is emollient, consolidating, resolvent, and vulnerary. The Leaves, bruised, resolve Tumors, and accelerate Suppuration; and the bruised Root is effectual in Inflammations of the hæmorrhoidal Veins.

**TELEPHIUM** is, also, a Name for the **ANACAMPSEOS**; which see.

**TELESPHORUS**. See **ACRSIVS**, and **ÆSCULAPIUS**.

**TELLINA**. Offic. Jonf. Exang. 48. *Tellina secunda*. Ron-del. de Aquat. 2. 7. Aldrov. de Exang. 518. Gein. Aquat. 940. *Tellina*. Charlt. Exang. 67. Bellon. de Aquat. 403. *Maris Italici*. Bonan. 104. n. 57. *Tellina intus ex Viola purpurascens, in ambitu ferrata*. List. Hist. A. A. 190. *Subfusca angustior intus purpurascens*. Ejusd. Hist. Conch. 3. n. 217. **THE LIMPIN**.

Fresh Limpins are good for the Belly, especially the Liquor of them: Salted and burnt, then triturated, and inslited with Resin, they prevent the Hairs of the Eye-lids, which have been pulled out, from ever growing again. *Dioscorides, Lib. 2. Cap. 8.*

**TELMA**, τέλμα, is ὁ τόπος πηλῶδης ὕδατος ἔχων, *A clayey or muddy Place holding Water*. And τελματώδεια, *telmatodea*, in *Hippocrates, Lib. περί ἀδινῶν*, are the outy, moist, and spongy Parts of the Body, which receive the superfluous Humours, as where he says, ὅπου τελματώδεια ἐστὶ καὶ ἀδινῆς, *So that where the moist and spongy Parts of the Body are, there you meet with Glands*: The Term being translated, by a Metaphor, from signifying outy, boggy, and marshy Places of the Earth, as appears from the following Expression a little after; καὶ ὅπου τῶσι τέλμασι τῆς γῆς καὶ καθύπερθε, ἢ ἐν τῷ τῷ πέτρῳ, *For neither does Seed grow in Bogs, and watry Soils.*

**TELON**. Fire. *Rulandus*.

**TELMUM**. A Dart. Tho' the modern way of making War has render'd a Detail of the Method of curing Wounds inflicted by Arrows and Darts of less Importance, it is necessary to take notice of the Artifices employ'd by the Antients for the Extraction of Darts, and curing the Wounds thereby inflicted.

Darts, and other missile Weapons, which have penetrated into the Body, and there remain, are oftentimes extracted with great Difficulty; which proceeds sometimes from the Kind of Weapon, with which the Wound is inflicted, sometimes from the Place in which it is lodged. All Darts, or other like Weapons, are extracted the Way, by which they enter'd; or by that to which they tended: In the first Case, the Weapon makes a Way for itself, by which it may return; in the other, a Passage is prepared for it by the Knife in cutting the Flesh against the Point of the Weapon. If the Dart, or the like, has not deeply penetrated, but is lodged in the outer Flesh, or, at least has not passed through the larger Veins, and nervous Parts, the best Method is to extract it the Way by which it enter'd; but, if the Passage, by which it must return, be longer than what remains to break through, and it has already made its Way through the Veins and Nerves, it will be most convenient to open a thorough Passage for it, and extract it the opposite Way, as being the nearest, as well as safest. And in one of the larger Members, if the Point be passed through, the Wound is the easier to be healed, as giving an Opportunity for the Application of Medicines to both Orifices; but, if the Weapon is to be retracted, the Wound is to be enlarged, that the Extraction may be the easier, and the Inflammation the less, which is always increased from a Laceration of the Parts by the Weapon in its Return. If a Wound be opened on the other Side, it is to be sufficiently large, so as not to be subject to Enlargement, from the Transition of the Weapon; and, in short, care is to be taken in both respects of wounding a Nerve, or Artery, or one of the larger Veins; but, if any such Misfortunes should happen, the Part, as soon as discover'd, is to be taken up with the blunt Hook, and cut off with the Knife. When the Incision is large enough, the Weapon is to be extracted, the same Care being taken, that none of the Parts, whose Security was before recommended, be injur'd by its Extraction.

#### OF EXTRACTION OF ARROWS.

Thus much has been said of Extraction of missile Weapons in general; but there are, besides, some particular Methods of Extraction properly belonging to the several Weapons. Nothing penetrates so easily, and lodges so deeply in the Body, as an Arrow, not only because it comes with great Violence, but, also, on account of its narrow and slender Make: For these Reasons, it oftener requires to be extracted at the adverse Part, than retracted the Way by which it enter'd; and the rather, because it is generally armed with Barbs, which cause a greater Laceration of the Parts in Retraction, than in Propulsion. For extracting



an Arrow, then, a Passage being opened, the Flesh is to be drawn asunder with a Steel Instrument, of the Figure of the Greek Letter  $\nu$ ; and if the Point, or Head, appears with the Shaft fastened to it, the Arrow is to be propelled, or thrust forwards, till it may be taken hold of on the other Side, and pulled out. If the Shaft be fallen out, and only the Iron Head remains within the Body, it is to be taken by the Point, with the Fingers, or with the Forceps, and so extracted. Nor is there any other Method of extracting an Arrow, when it is thought most convenient to do it, the Way by which it enter'd; for the Wound must be enlarged; and the Shaft, if there be any, if not, the Iron alone, must be drawn out. If there appear any Spicula, or Barbs, and they are but short and slight, they are to be broken with the Forceps, and the Arrow is to be extracted without them: If they are thick and strong, they are to be sheathed in slit Reeds, to prevent their lacerating the Parts, and so pulled out.

#### OF EXTRACTING BROAD DARTS.

If a broad Dart be lodged in the Flesh, it cannot conveniently be extracted on the other Side, because that would be to add one large Wound to another: It is to be pulled out, therefore, with an Instrument which the Greeks call *Διοκλῆος γράψιον*, *The Graphisius of Diocles*; who was one of the greatest Physicians among the Antients. This Instrument consists of an iron, or a copper Plate, which at one End is furnished with an Hook on each Side, bent downwards; at the other End it is doubled in on the Sides, with an easy Slope from the Extremity to the folded Part; and a Slope, also, in the Part which is perforated. This Instrument is introduced athwart the Weapon, till it reaches its Bottom, when they turn it a little, that it may receive the Point within its Perforation; which done, the Operator, with two Fingers under the Hooks, at the other End of the Instrument, extracts both that and the Weapon together.

#### OF EXTRACTING SOME OTHER KINDS OF WEAPONS.

A third Kind of Weapons, which sometimes require to be extracted, are leaden Balls, Stones, and the like, which have their whole Substance buried within the Skin. In all these Cases the Wound must be enlarged, and the offensive Body extracted with the Forceps by the Way it entered.

But there is, besides, an additional Difficulty in all Wounds, if the Weapon sticks or lodges in a Bone, or in a Joint between two Bones. If it be fixed in a Bone, it is to be moved, and gently agitated, till it be loosen'd from the Place in which it lodged, as the manner is in drawing Teeth; and the Weapon seldom or never fails to follow, upon drawing; but, if it stays, some Instrument must be used to dislodge it. The last Method, where other means of Extraction fail, is to make a Perforation near the Place, with an Instrument for that Purpose, and from that Perforation to cut the Bone, towards the Seat of the Weapon, in the Figure of the Letter V; which done, the Weapon must of Necessity be loosened, and may easily be separated.

If the Dart, or other missile Instrument of War, have made its Way through the Joints, and lodged itself between two Bones, the two Limbs, near the Wound, are to be swathed, and then pulled and drawn this Way and that Way, that the Tendons may be distended; by which means more Space will be left between the Bones, and so the Weapon may be extracted without much Difficulty, Care being taken, as before advised, that no Nerve, Vein, or Artery, be wounded by it in the Extraction.

#### OF EXTRACTING POISONED DARTS, OR OTHER WEAPONS.

Poisoned Weapons are to be extracted by the same Methods, if possible, as the others, only greater Speed is required; and, moreover, the time means are to be used as for drinking of Poison, or the Bites of Serpents. The Method of Cure, after Extraction of the Weapon, is the same here, and in all other Cases, as it would have been, if the Weapon had never lodged in the Wound. *Celsus, Lib. 7. Cap. 5.*

Darts, and other Kinds of missile Weapons, differ in Substance, Figure, Magnitude, Number, Structure, and Effects. With respect to Substance; as to the Shaft, it may be of Wood or Cane; and for the Head, it may be made of Iron, Brass, Tin, Lead, Horn, Glass, Bone, or even of Wood or Cane, as well as the Shaft; so many Differences are to be found, especially among the *Egyptians*. As to Figure, some are round, others angular, as are those which are triangular; some cuspidated or kneinated, as they are called, such are those with three Points; some are barbed, others not; and of those which are barbed, some have their Barbs inflected backwards, that they may wound and enter the Parts in Extraction; others have them directed forwards, that they may do the same in Impulsion; some, again, have their Barbs oppositely disposed in such a manner, after the Figure of a Thunderbolt, that, whether they are retracted or impelled, they wound alike, others, which move on an Hinge, have their Barbs contracted, but expanded by drawing, and by that means impede the Extraction of the Dart. With respect to Magnitude; some are three Digits in Length, others but one, which the *Egyptians* call *Mista*; others are of a middle Length. With regard to Number; some are simple, others compound, be-

ing furnished with slender Spikes of Iron, which, in Extractions, remain behind in the Body. With respect to their Make or Structure; some have the End of the Shaft first sharpened, and then inserted into the Head; others have a Tube, into which the Head is inserted; some have the Shaft firmly fastened to the Head; others but slightly, to the end that in Extraction they may be separated, and the Head remain behind. As to their Effects, some are medicated, or poisoned, others not.

We have given you the Characters by which Darts differ from each other, and are now to shew the Methods of their Extraction from the Bodies of those who are either wounded in War, or otherwise, whether voluntarily or involuntarily, whatever may be the Occasion, or wherever the Substance of the Dart, by which the Wound is inflicted. Darts may be extracted from the Body, either by Attraction or Impulsion; Where the Wound is but shallow, the Extraction is performed by the first Method; as it is, also, in deep Wounds, when it is dangerous to open a Passage on the opposite Side, on account of an Hæmorrhage, or Consent of Parts [*Συμβασις*]. The Method by Impulsion is to be preferred, when the Weapon has deeply penetrated, and the Remainder of the Passage to the opposite Parts is but short, and not incommoded by Nerve, Bone, or any other thing which may forbid a Section: But when the Weapon is fixed in the Bone, there is no other Method but Attraction to be used.

If, then, the Weapon appears in Sight, we immediately set about extracting it: If it be remote and latent, the Patient, says *Hippocrates*, is, if possible, to be placed in the same Posture in which he was wounded, and the Wound explored: If this cannot be done, he must, at least, lie in a Position the most conformable that may be to that Posture, and the Wound is to be probed. And if the Weapon be fixed in the Flesh, we are to pull it out with the Hands, by the Shaft, or the Part which is principally of Wood, if not fallen out; but if this Part be fallen out, or separated from the Head, the Extraction must be performed with the Forceps contrived for the pulling out of Teeth, or Roots, or Weapons of this Kind; and the Flesh must be cut, if the Wound be not large enough to admit the Instrument. If the Dart, or the like, has penetrated to the opposite Parts, so as to render it impossible to extract it the Way by which it entered, we are to open it a Passage by dividing those Parts, and bring it out through the Section, either extracting it in the Manner above directed, or impelling it, either by the Shaft, or, if that be fallen out, by introducing some impulsive Instrument, taking due Care, that no Nerve, Tendon, Artery, or any other necessary Part, be divided; for it would be a Shame, in extracting the Weapon, to make a worse Disorder than that caused by the Dart. And here, if the End of the Weapon inserted in the Shaft be sharp, which may be known by probing, it is to be propelled, or thrust forward, by the Help of a female Instrument, adapted and introduced for that Purpose: If the End of the Weapon be hollow, or tubulous, the Propulsion is effected by a male Instrument. If the extracted Head appears with Incrustments, so as to give Occasion for suspecting Spikes inserted in it, the Wound is again to be searched, and the Spikes extracted: When the Head is barbed both Ways, and, therefore, cannot be propelled or retracted, Incisions are to be made in the adjacent Parts, that the Weapon, being laid bare, may be extracted without Molestation: Some sheath the Barbs in a Reed; and by that means secure the Flesh from Laceration, in the Extraction. If the Wound be free from an Inflammation, after convenient Sutures, we heal it by the common Method of treating green Wounds; if the Part be inflamed, we use Embrocations, Cataplasms, and other Topics proper for an Inflammation. If the Weapon be poisoned, we cut away, if it be possible, all the infected Flesh, which is known to be so by its Difference from what is sound, in appearing pale, livid, and, as it were, mortified. The *Dacians* and *Dalmatians* are reported to anoint the Barbs of their Arrows with *Helenium*, called, also, *Ninus*, which, if it mixes with the Blood of the wounded Person, proves mortal, though, if it be eaten by them, it does them no manner of Harm. If the Weapon be fixed in the Bone, we make a new Search with the Probe; and, if the Flesh be an Impediment, we cut it away, or lay it open: If the Head be deeply lodged in the Bone, which is known by its Firmness, in not being subject to Concussion, though Violence be offered, the Bone is to be cut round about, or, if it be thick, perforated, in order to dislodge the Weapon.

If the Dart, Arrow, or the like, be fixed in some principal Part, as the Brain, Throat, Heart, Lungs, Liver, Stomach, Intestines, Kidneys, Uterus, and mortal Symptoms already appear, and the Extraction cannot be made without much Trouble and Difficulty, we decline the Operation, not only on account of the Impossibility of Success, but lest we should expose ourselves to the Reproach of the Ignorant. If the Event be dubious, the Extraction is to be undertaken, Warning being first given of the Danger: For many have recovered of a Wound in some principal Part, beyond all Hope, a Suppuration arising therein; and even a Lobe of the Liver, a Part of the Omentum, and of the Peritonæum, and even the entire Uterus, have been often known to be removed; and yet the Consequence has not been Death;



and we frequently use Bronchotomy in a Quinsy. In such Cases, to leave the Weapon in the Part induces inevitable Death, besides an Imputation of Cruelty and Inhumanity upon the Art; whereas the Extraction of it has been the means of saving many Lives.

It is not difficult to know whether some principal Part be wounded; for it may be discovered by peculiar Symptoms, as well as from the Excretions, and the Situation of the Parts. A Wound in the Membranes of the Brain is succeeded by a violent Pain all round the Head, a Fervor of the Eyes, a Redness of the Tongue, and a Disorder of the Reason. If the Wound reaches the Brain, the Patient falls down, loses his Voice, vomits Bile, distorts his Face, bleeds at the Nose, and discharges a white and pulsatous Humour at the Ears, if there be an Evacuation of Sanies from the Part affected. If the Weapon be fixed in the Cavity of the Thorax, so as that a Space be left for it, the Breath passes through the Perforation. If the Heart be wounded, the Weapon appears about the Left Breast, not as if it had penetrated into a Cavity, but, as it were, fixed in another Part, and sometimes seems to have a pulsatory Motion; there is, also, an Excretion of black Blood, if there be a Passage for it, with an universal Coldness, Sweat, Fainting, and Death speedily follows. A Wound of the Lungs is succeeded by a Discharge of spumous Blood, through the Perforation, if there be Room for it, if not, it is discharged mostly by Vomiting, the Vessels about the Neck are elevated, the Tongue changes Colour, there is a great Respiration, and a Desire of cold Water. In a Wound of the Diaphragm, the Weapon at the spurious Ribs appears fixed, there is a great Inspiration, with a Pain, and an universal Angustation of the Parts about the Shoulders. A Wound in the Abdomen is manifest from the Excrements, if there be room for it; or else from the Weapon, when extracted, or the Shaft broken within; there is a Vomiting of Chyle, and a Discharge of the Excrements. When the Bladder is wounded, there is an Effusion of the Urine.

As for Extractions in these Cases, when the Brain, or its Meninges, are wounded, we extract the Weapon through the Perforation of the Cranium. In the Thorax, if the Weapon resists, we make a moderate Incision between the Ribs, or even cut out a Rib, placing a Meningophylax [an Instrument to guard the Membrane]. We take the same Method in Wounds of the Abdomen, Bladder, and other deeply seated Parts; that is, if the Weapon readily follows, we extract it without Hesitation; otherwise we enlarge the Perforation, and treat it as other recent Wounds are treated; only, for the Abdomen, a Suture, also, may be necessary.

If the Weapon be fixed in some large Vessel, as the internal Jugulars, the Carotides, or the large Arteries about the Groin, or Armpits, and a larger Hæmorrhage is to be feared from the Extraction, a Bandage is to be applied, above and below the Place, before you make the Extraction.

If, by the Weapon, one Part be fixed to another; as, for Instance, the Arm to the Thorax; or the Cubit to other Parts of the Body; or the Feet to one another; if both Parts are not thoroughly perforated, we take hold of the external Part of the Weapon, and extract it, as in a single Perforation: But, if it has penetrated through both Parts, we cut the Shaft in the Middle, and extract the Pieces.

It often happens, that Stones, ragged Flints, Pieces of Lead, and the like, discharged from Slings, by the Violence of their Motion, and the Angulosity of their Figure, penetrate into the Body: These discover themselves by a rough and unequal Tumor; and in that the Division they make has no direct Course; it is, also, larger, the Flesh appears confused and livid, and the Pain is attended with a kind of Heaviness. In such a Case, the offending Masses are to be dislodged, and extracted by a concave or vulnerary Probe, or some other fit Instrument; or, if the Wound will admit of it, may be taken out with the Forceps contriv'd for drawing Teeth; or that for pulling up Roots [*ὁδονύκτες ἢ ῥιζότρες*]. There are many Instances in which the Weapon has lain concealed within the Body, a long time after the Wound has been cicatrized, and has at last discharged itself through an Abscess, arising and breaking in the same Place. *P. Ægineta, Lib. 6. Cap. 88.*

TEMACHOS, *τέμαχος*, from *τέμνω*, to cut, is a Piece separated from the Whole by Section. *Lat. Tomaculum.* It is the same as *τόμος*, *Tomos*; but is chiefly spoken of Pieces or Fragments of Fishes, as is observed by the Scholiast on *Aristophanes's Plutus*, where he says, that *Temachos* is spoken of a Piece or Fragment of a Fish, or a Cake, but not of Flesh. The same Scholiast, on the Comedy of *the Frogs*, expounds *τεμάχιον* by *κβμμάλα τῶν ἰχθύων*, *Slices of Fishes*. The Word, as well as its Diminutive, *Temachion*, *τεμάχιον*, is used in the same Sense, that is, for a Piece, Cut, or Slice of a Fish, in several Places of *Hippocrates, de Morbis & de intern. Affect.*

TEMPERAMENTUM. A Temperament, or Constitution. The ancient Division of Constitutions was into hot, cold, moist, dry, bilious, sanguine, phlegmatic, and atrabilarious.

The Characteristics of an hot Constitution were said to be, a large Quantity of yellow gross Hairs all over the Body; a redish

Colour of the White of the Eye; a very red Colour of the Carunculi Lachrymales, Face, Lips, and Mouth; a slender, agile, robust, and hot Body; a large and frequent Pulse; a Propensity to Anger, which, however, is soon over: Such Persons seem to have robust and contracted Vessels, strong Viscera, and very dense and acrid Humours, in a brisk Motion. Moistening, diluting, and tempering Substances are beneficial; whilst, on the contrary, all heating things are highly prejudicial to such Persons.

The Signs of a cold Temperament are directly opposite to the former; such as a Smoothness of the Skin; small Hairs; a pale Colour; a gross, slow, weak, cold, and easily swelling Body; a small and slow Pulse; Insensibility; and Fearfulness. The Humours of such Persons are mild, aqueous, pituitous, and languid in their Motion, whilst their Solids are lax and flaccid: Corroborative and heating Substances are beneficial, whilst cold, moist, and relaxing Things, are injurious to such Persons.

A dry Temperament is discover'd, almost, by the same Signs with those of the hot Kind, if there is, at the same time, a Leanness of the Habit. The Vessels of such Persons are contracted, and their Fluids small in Quantity, and almost acrid. Moistening, diluting, and temperate Substances are beneficial, but all heating Things injurious, to such Persons.

A moist Temperament approaches greatly to that of the cold Kind; for, if in the former there is a Swelling of the Body, they are, in other respects, the same.

A bilious Temperament is known from the great Quantity of black and curl'd Hairs; an Hardness, Extenuation, and Leanness of the Body; a dark-brown Colour; large Veins; a quick and large Pulse; Obstinacy, and a Propensity to Anger. In such Persons, the solid seem to exceed the fluid Parts. This Temperament approaches to those of the dry and hot Kinds. Hot and drying Substances are prejudicial, but moistening and refrigerating Things beneficial, to Persons of bilious Temperaments.

A sanguineous Temperament is discover'd by a small Quantity of Hairs, of a dark-brown, or whitish-yellow Colour; a large Quantity of soft Flesh; large blue Veins, distended with Blood; a redish Colour; a Propensity to Anger; and a flexible Mobility of Body. Evacuating and tempering Substances are beneficial, whereas heating and drastic Stimulating Things are pernicious to such Persons.

A phlegmatic Temperament is known from the great Smoothness of the Skin; white, slender, and slow-growing Hairs; a Whiteness, Swelling, Softness, and Fatness of the Body; narrow and latent, or deep-seated Veins. Such Persons seem to have narrow Blood-vessels, but somewhat larger lateral Vessels. This approaches to the cold Temperament; for which Reason, moist and cold Things are prejudicial, whereas heating, corroborating, and drying Substances are beneficial, to Persons of phlegmatic Temperaments.

The Signs of a melancholic Temperament are, Smoothness; highly black Hairs; extreme Leanness; great Driness of the Skin; and the blackish Colour which is observed in all the Parts of such Persons Bodies; Slowness; Constancy; long Retention of Anger; and great Penetration of Understanding: For this Reason, such Persons seem to have constricted, robust, and lean Vessels, and dense tenacious Humours, so thoroughly mix'd, that their Parts cannot be easily separated or changed. Such Persons are greatly injur'd by hot, drying, and acrid Substances; whereas moistening, refrigerating, relaxing, emollient Substances, and such as gently dissolve without any Acrimony, are beneficial to them.

This Doctrine is of great Advantage in investigating the Natures of those Diseases, which may be foreseen to arise from, and be most incident to, each particular Temperament. Upon this Doctrine, also, depends a great Part of the predisposing Causes of Diseases. *Boerhaav. Institut.*

TEMPERANTIA. Temperating Medicines.

Among the various Alteratives, we may justly reckon temperating Medicines, which not only check the hot intestine Motion of the sulphureous Particles in the Blood, but, also, contemperate, subdue, and consequently refrigerate, the excessively hot bilious Humours in the Intestines. Among Vegetables, the most considerable of this Kind are, the Root and Herb of Sorrel, Wood-sorrel, Citrons, China Oranges, Pomegranates, Currants, Strawberries, Barberries, Raspberries, Cherries, and their prepared Juices; Syrups and Waters distil'd from these, when recent; the Four greater cold Seeds, and Decoctions of Barley. Among Animal Substances, the most considerable, of a temperating Kind, are Whey, Butter-milk, Juice of River-crabs, Decoctions of Tortoises, weak Decoctions of the Shavings of Hartshorn and Vipers-grass, with or without Barley; Gellies of Hartshorn, and the Water distil'd from Shavings of Hartshorn. Among mineral Substances, the most efficacious of this Class is well purified Nitre; or, which is still better, Nitre regenerated from Aquafortis, by the Addition of Salt of Tartar. And, among Chymical and Pharmaceutical Preparations, the most considerable are, the essential Salt of Wood-sorrel; Cream of Tartar; Phlegm of Vitriol; sulphurated Clyffus of Antimony; and the Tinctures of Roses, Daisie-flowers, and Violets, prepared with Spirit of Vitriol.

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Temperating Medicines act in three Manners; for, by means of their acid Salt, they bridle the volatile sulphureous Particles; and, by fixing their hot, internal, vertical Motion, and coagulating them, they, in some measure, lessen them: Or they operate by a certain expansive aereo-elastic Quality, such as that of which Nitre is possessed, which, being composed of an acid and alkaline Salt, contains not only a large Quantity of sulphureous Particles, but, also, of an aereo-etheral Fluid, by which it dispels the hot Matter in a violent, preternatural and vortical Motion, and produces, as it were, an Explosion of it from the Centre to the Periphery; whilst, at the same time, by the neutral Salt it contains, it resolves, attenuates, and separates the thick Matter, which is the Matrix of the Heat and Sulphur, the quick Motion of whose Parts it stops, by its subtile Acid: Or they exert their Operation, by diluting and disjoining the adhering Parts, and restoring the Moisture consumed by the Heat, whilst, at the same time, they relax the too great Elasticity of the Vessels on which the Heat depends; as is principally observed in aqueous Liquors, such as Whey, Decoctions of Hartshorn, and of Barley.

These temperating Medicines are certainly of great Use in Medicine, where a greater natural Heat is to be extinguished; for which Reason, the Physician can by no means be without them in Fevers of all Kinds; as, also, in Inflammations, Spasms, and Pains, which are always attended with an hot and excessive Combustion of the Blood. But nitrous Preparations are justly preferable to Acids, which act by fixing and coagulating the Fluids; for Nitre is not only refrigerating, but, also, relaxes the rigid and spasmodically constricted Parts, whilst, at the same time, it promotes a Discharge of the Urine and Excrements. As other refrigerating and acid Substances rather condense and coagulate the Fluids, so Nitre rather colligates, rarefies, and attenuates the thick and viscid Humours. Hence Nitre reduced to a Powder, or previously dissolved in Water, when mix'd with black coagulated Blood, renders it more fluid and florid: For this Reason, it is not only far more proper than other Acids, in Inflammations, and inflammatory Fevers, arising from black, coagulated, and incarcerated Blood; but, also, highly beneficial in detaching the Body against Inflammations, because it effectually softens and dissolves the tenacious and thick Matter of the Serum, a large Quantity of which appears in the Blood of Persons subject to inflammations.

In chronical Fevers, such as those of the slow and hectic Kind, which generally draw their Origin from some Fault or Corruption of the Viscera, and especially when they are attended with a Cough, or a Spitting of Blood, or when the Lungs are any way affected, we are not to exhibit Acids, but nitrous and diluting Substances, especially those furnished from the Animal Kingdom, such as Whey, together with the Waters, Decoctions and Gellies of Hartshorn. Where a febrile Heat accompanies Diarrheas, Dysenteries, or a Cholera, we are, also, to abstain from acid and refrigerating Medicines, and rather to use diluting, gelatinous, and mucilaginous Substances, with an Addition of the temperating and absorbent Powders, and a Grain or two of Nitre. *Federic Hoffman*

TEMPERIES. The same as TEMPERAMENTUM.

TEMPLUM SOSTRATI. The Name of a Bandage described by *Galen*, in his Treatise of Bandages.

TEMPLUM PARVUM APOLLONII TYRII. The Name of another Sort of Bandage, described by the same Author, in the above-quoted Treatise.

TEMPORA. The Temples. *Tempora Morborum* are the Times of Diseases, that is, their Beginning, Increase, State, and Decline.

TEMPORALIS MUSCULUS. The Temporal Muscle. See CAPUT.

TENACULA. A Chirurgical Instrument, contrived for laying hold of any thing, of which there are many described by Chirurgical Authors.

TENELLA. The Tenth. See TINGA.

TENDO. A Tendon. See MUSCULUS.

For Names of the Tendons, see SUTURA.

For Wounds of the Tendons, see VULNUS.

For the Method of treating a Tendon prick'd in Bleeding, see PHLEBOTOMIA.

TENESMUS. A Tenesmus is a too frequent, and almost continual, tho' ineffectual, Desire of going to Stool; since either nothing at all, or only a small Quantity, of mucous, viscid, bloody, or purulent Matter is discharged. This Disorder may be produced by a Dysentery; a Diarrhœa; the Hemorrhoids; that Species of Worms call'd *Ascarides*; the Stone in the Bladder; a Wenaelet, or Ulceration, of the Sphincter Ani; or an irritating Humour in the Intestinum Rectum. In a Tenesmus, the Inclination returns more frequently than in a Dysentery, and the Pain is principally confined to the Intestinum Rectum. A Tenesmus is generally less dangerous than a Dysentery, except when it is accompanied with an Ulcer of the Intestinum Rectum, a Fistula in Ano, or a falling down of the Rectum. The Regimen, and Method of Cure, proper in a Tenesmus, are the same with those prescribed in a Dysentery. In this Disorder, great Relief is afforded by a Fomentation of warm Milk, in which Elder-flowers

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have been boil'd; as, also, by a Clyster of Mutton-broth, or an emollient Clyster, in which Earth-worms have been boil'd. The Medicines, at present most generally used, for the Cure of a Tenesmus, are these following.

Take of the Pulvis Sanctus, and Rhubarb, each one Scruple; of the Oil of Cinnamon, one Drop; of *London* Laudanum, half a Grain; and of the Syrup of Violets, a sufficient Quantity, for making into a Bolus, to be taken in the Morning, and repeated, as the Situation of the Patient requires.

At Night, a Paregoric may be exhibited, and Clysters afterwards used; for which Purpose,

Take of Whey, or Mutton-broth, four Ounces; of Canary Wine, two Ounces; of Gum Arabic, half an Ounce; of Gum Tragacanth, one Dram; and of crude Opium, two Grains. Make into a Clyster, to be injected twice or thrice a Day.

Or,

Take of the Decoction of Mallow-leaves, and Canary Wine, each three Ounces; of Suet, impregnated with the Juice of Melilot, an Ounce and an half; of Sperma Ceti, and the Confection of *Fracaforius* without Honey, each one Dram and an half; one Yolk of an Egg; and of *London* Laudanum, four Grains. Make up into a Clyster.

Or,

Take of the Roots of Tormentil, Bistort, and Pomegranate-peel, each one Dram; and of the Leaves of red Roses and Balauftines, each half an Handful. Boil in a sufficient Quantity of Spring-water; and to three Ounces of the Liquor, when strain'd, add three Ounces of red Wine, two Yolks of Eggs, and of *London* Laudanum, five Grains. Make all into a Clyster.

Afterwards, continue the following Medicine for some time.

Take of the Confection of *Fracaforius* without Honey, one Scruple; of Sperma Ceti, fifteen Grains; of the Species Hyacinthæ, *Japan* Earth, red Coral, and *Armenian* Bole, each eight Grains; of the Oil of Nutmegs, one Drop; and Syrup of red Roses, a sufficient Quantity for making a Bolus, to be taken twice a Day, in a small Quantity of the Tincture of red Roses.

In a Tenesmus, the last Refuge is to Opiates.

The Disorder which the *Greeks* call *τενισμός*, and the *Latins* *Tenesmus*, bears a great Affinity to what we commonly call Gripes, which it often precedes and follows. In a Tenesmus, as well as in Gripes, there is a Pain of the Anus, and a frequent Desire of going to Stool; whilst a mucous Substance, full of Phlegm, and somewhat bloody, is discharged. And as the Ulcer of the Intestinum Rectum increases, a purulent Matter is eliminated. In this Disorder, it sometimes happens, that the Excrements resemble undigested Aliments. When pregnant Women are seized with a Tenesmus, it frequently causes a Miscarriage. This Disorder is easily cured, and, of itself, rarely proves mortal, especially when the Patient is free from a Fever, and retains his natural Appetite for Food. A Tenesmus happening in the Autumn is generally contagious, and, for the most part, terminates in Gripes. And as this Case is generally dangerous in Adults, so it proves mortal to Children. An inveterate and long-standing Tenesmus sometimes terminates in the Hæc Paffion; or, when it proceeds from Phlegm, in a Pain of the Colon: But, if it proceeds from Bile, it is generally succeeded by Gripes. A neglected Tenesmus often leaves behind it a fordid and purulent Ulcer, which degenerates into a Fistula, not to be cured without the greatest Difficulty. *Lommi Medicinal. Observat.*

TENGA. See *Palma*; *Indica*; *coccigera*; *angulosa*.

TENON, *τίνον*, a Tendon. See TENDO.

TENONTAGRA, *τινοντάγρα*, from *τίνον*, a Tendon; and *άγρα*, a Seizure. A Species of Arthritis, seated in the larger Tendons; for instance, in the tendinous Ligaments of the Nucha. The Word occurs in *Celsus Aurelianus*, *Lib. 5. Chronic. Cap. 2.* near the Beginning.

TENONTOTROTI, *τινοντότροτοι*, from *τίνον*, a Tendon, and *τροτί*, of *τρίπακω*, to wound. Such as are wounded in the Tendons. *Galen de C. M. P. G. Lib. 3. Cap. 2.*

TENOR, *τίρος*. See TONOS.

TENSIO, *τάσις*, the same as DISTENSIO, or DISTENTIO; which see.

TENSIVUS, *τονώδης*, tensive. An Epithet of a Pain accompany'd with a Tension, and proceeding, as *Galen* says, *de Loc. affect. Lib. 3. Cap. 9* from a Flatus, or Spiritus.

TENSOR



TENSOR *Digitorum*. See EXTENSOR DIGITORUM COMMUNIS.

TENTA, in Surgery. A barbarous Word for a Tent.

TENTHRENIODES, *τενθρηνιόδης*, in *Hippoc. περί ἀνδρ.* Is an Epithet apply'd to the Lungs, and signifies, full of small Perforations, or, of a very rare Contexture. The Word comes from *τενθρην*, an Insect furnish'd with a Sting, and like a Wasp, by *Aristotle* call'd *τενθρηνιδαν*, and render'd, by *Gaza*, *Teredo*, "a Perforator." Hence *τενθρηνιον*, in the same Author, is an Hive, or Nest, of these Animals, and very properly render'd by *Gaza*, a Person universally esteem'd for his Learning, *Teredinarius*. The Lungs, then, are said to be *Tenthreniodes*, that is, tenedinous, as it were, and full of Pertusions, or of a rare Substance by Nature; or, as *Galen, de Usu Part. Lib. 7. Cap. 9.* describes it, a soft, porous, and spiritious Flesh, made for Concoction of the external Air, the proper Aliment for the Spirit.

TENTIGO. See PRIAPISMUS.

TENTIO. The same as TENSIO before.

TENTIPELLUM, from *tendo*, to stretch, and *Pellis*, the Skin. A cosmetic Medicine for smoothing the Skin from Wrinkles.

TENUANS, the same as *Attenuans*, attenuating. See ATTENUANTIA.

TENXIS, *τέγξις*, from *τέγω*, to moisten, dip, or tinge, in some Liquid, is expounded in *Erotian* by *διάβρεξις*, an Humectation, or Moistening. The Word is read, 6 *Epid. Sect. 8. Aph. 15.* and is oppos'd to *ξηρότης*, *Xerotes*, Drinels.

TEPHRICON, *τεφρικόν*, from *τέφρα*, Ashes, is the same as SPONDICUM; which see.

TEPHRION, *τέφριον*. The Name of a Collyrium, so call'd from *τέφρα*, Ashes, because it was of an Ash-colour. It was otherwise call'd CYTHION, *κύθιον*, and is described by *Aetius, Lib. 7.* and, after a different Manner, by *Celsus, Lib. 6. Cap. 6.*

TEPIDARIUM, a Part of the Bath in which they sat awhile, and sweated gently, during the Time they put off their Cloaths, and made themselves ready for entering the *Caldarium*, *Celsus, Lib. 1. Cap. 4.* It was much the same with the *APODYTERION*; which see.

TEPIDUS, *χαλαρός*. See CHLIAROS.

TERAGOLINICA, prepared, or made up with the Hand. *Rulandus*.

TEREBELLA. A Name for any Chirurgical Instrument, with which Bones are perforated.

TEREBINTHINA. Turpentine. See BALSAMUM, and TEREBINTHUS.

TEREBINTHUS.

The Characters are;

The Leaves are pinnated to a common Rib, ending in an odd Leaf. The Flower on the male Plant is apetalous, and consists of apiculat'd Stamina. The Fruit on the female Plant is an unilocular, or bicapular Shell, full of oblong Seed.

*Boc-haave* mentions three Sorts of *Terebinthus*; which are, 1. *Terebinthus*; vulgaris. C. B. P. 400. *Tourn. Inst. 579. Boerb. Ind. A. 2. 173. Terebinthus. Offic. Ger. 1245. Emac. 1433. J. B. 1. 278. Rai Hist. 2. 1577. Terebinthus angustifolia vulgarior. Park. Theat. 1526. THE TURPENTINE-TREE.*

This grows to be a pretty large Tree in the Eastern Countries; but in the Western Parts of the World it grows only to be a large Shrub: The Leaves are large, consisting of several oval, round-pointed Pinnæ, set opposite, with an odd one at the End; the Flowers appear early in the Spring, before the Leaves, in large Clusters of purple Stamina only; after which, come longish hard Nuts, whose Kernels are of a viscous and resinous Taste. The true Turpentine is the Resin of this Tree, the best of which comes from the Island of *Chio*, and is of a whitish Colour, clear, and almost transparent; thicker, and more tenacious, than *Venice* Turpentine; of a pleasant Smell: That which comes from *Cyprus* is browner, and fuller of Drofs. *Miller's Bot. Off.*

This Turpentine is of the Consistence of Honey, of a very pleasant resinous Smell, and the best of all Turpentines for internal Use. It gives a violet Smell to the Urine, even when given in a Clyster. It is an excellent Diuretic, and very proper in Ulcers of the Kidneys, Bladder, and Uterus. In Gonorrhœas, it is commonly made into a Bolus with prepared Crabs-eyes, or any other Absorbent. It may, likewise, be taken in the Yolk of an Egg, from half a Dram to a Dram. All these Precautions are necessary only to shun the disagreeable Taste; and Sugar, and powder'd Liquorice, may be used for the same Purpose. It is, likewise, often given in Clysters; being first dissolved in the Yolk of an Egg, and then mix'd with the Decoctions. It is thus administered in Stone Colics; but the Intestines ought previously to be unloaded by purgative Clysters. The Dose, in this manner, is from an Ounce to an Ounce and an half. Turpentine, like all other Balsams, is to be avoided in inflammatory Dispositions of all Kinds. *Geoffroy*.

The Compilers of the *Adversaria*, following, I suppose, *Theophrastus*, have made the *Terebinthus* an Evergreen; but we are well assured by *Bellonius*, *Rauwolfius*, *Casalspinus*, and *Clusius*, Persons of Veracity, and Eye-witnesses, that the Leaves are ca-

duous. The *Terebinthus* delights, as *Matthiolum* says, in dry and stony Places, which are exposed to the Sun. *Dioscorides* says, it grows in *Judea*, *Syria*, *Cyprus*, *Africa*, and the Islands of the *Cyclades*; and we are told by *Clusius*, that it grows spontaneously in many Parts of *Spain*, *Portugal*, and *Languedoc* and *Provence* in *France*, where, sometimes, it shoots up to the Bigness and Perfection of a Tree, but can generally be reckon'd no other than a Shrub. He might have mention'd *Italy*, says *Ray*, among the Places where it grows; for I have observ'd it in that Country myself. *Clusius*, for his Part, never knew that Resin was extracted from the *Terebinthus*, in the before-mention'd Places; but *Lobel* assures us, that the Turpentine-trees in the Wood of *Valera*, near *Montpelier*, will sometimes discharge a good Quantity of Turpentine from small Wounds made in the Tree. *Bellonius* says, that it grows plentifully in *Syria* and *Cilicia*, and that they gather a Gum from it, which is carried to *Damascus*, and sold there; but what is sold at *Cairo*, is brought thither from the Country which the *Turks* call *Asamia*, that is, *Mesopotamia* and *Affyria*. The Tree flowers at *Montpelier* in *April*, and *J. Bauhine* gather'd the Fruit in *September*.

The Leaves, Fruit, and Bark of the *Terebinthus* are, according to *Dioscorides*, of an astringent Quality; and are effectual for the same Purposes as those of the *Lentiscus*, being prepared and taken after the same Manner. The Fruit is esculent, but hurtful to the Stomach, is heating, and provokes Urine. It is, also, well adapted to excite to Venerly. Taken in Wine, it is good against the Bite of the *Phalangium*; and the Seed, as *Pliny* says, is taken inwardly for a Pain of the Head.

*Bellonius* says, that the ancient Custom of eating the Seeds of the *Terebinthus* still remains in *Syria* and *Cilicia*; and that he once met an *Arabian* Peasant, leading a Camel laden with the Seeds of the *Terebinthus*, that he might sell them at *Damascus*.

There are a Kind of Galls, of the Size of Filberds, hollow within, and produced from Excrescences of the Leaves of the male *Terebinthus*. These, about the End of *June*, are gather'd by the Peasants of *Thrace* and *Macedonia*, and sold, at a dear Rate, to the Silk-dyers of *Prusa* in *Bithynia*. They take care to gather them, as soon as they are grown to the Size of Galls; otherwise, if let alone, they would run out to the Length of half a Foot, in the Shape of an Horn. Six thousand Weight of them are, every Year, consumed only by the Dyers aforesaid.

What we call Turpentine, as *Cordus* describes it, is the Resin of the *Terebinthus*, white, yellowish, vitreous, or white inclining to ceruleous, and sometimes pellucid; and, being rub'd, falls abroad into a Multitude of small Grains, and, soon after, becomes viscid and glutinous. It has an acrid, pleasant, tho' somewhat strong Smell, and not unlike the Resin of the *Larix*, especially when handled, or thrown upon the Coals; it is of a bitterish Taste, and becomes slimy under the Teeth, and sticks to them. It distils, at first, liquid, and grows dry by degrees. Impositors call the dry Sort, *Thus*, *Frankincense*, or *Incense*, and sell it for *Thus*; but the true *Thus* they call *Olibanum*, not knowing that this *Greek* Word, and the *Latin* Word *Thus*, are Names for the same Thing.

Turpentine, in the Opinion of *Dioscorides*, exceeds all other Resins; and, next to Turpentine, is *Mastic*, which *Galen* prefers before it.

All Resins, says *Dioscorides*, are mollifying, heating, dissolving, dissipating, and cleansing. In an Eclegma, whether alone, or with Honey, they are proper in Coughs and Consumptions, and promote Expectoration. They, also, provoke Urine, concoct Crudities, and render the Body soluble. They are of Service in agglutinating the Hairs of the Eye-lids; and, with *Verdegrise*, *Vinriol*, and *Nitre*, cure the Leprosy; and, with Honey and Oil, are effectual in cleansing the Ears, when overflowing with Sanies; and remove an Itching of the Pudenda. They are Ingredients in Plaisters, Malagmas, and Acopa; and are good for Pains of the Sides, being used alone, by way of Application, or Inunction.

Turpentine, according to *Galen*, has a kind of Butenels, in Conjunction with a moderate Astringence; on which Account, it is more digestive than *Mastic*; and the same Quality renders it absterlive to such a Degree, as to cure the Piora; and, for the like Reason, it loosens the Belly.

The Moderns ascribe to it the Virtues of cleansing the Thorax, Liver, Spleen, Kidneys, and Bladder, from all Impurities. It is of Service, also, in inveterate Coughs, Difficulty of Breathing, a purulent Spitting of Blood, Vertigo, Stone, and peculiarly for the Sciatica, and the Gout in the Feet and Hands; it opens, cleanses, warms, and strengthens the Nerves.

In particular, Turpentine is very useful in the Stone, and other Disorders of the Kidneys. Hence it is usual in Practice for the Cure of the Gravel, after mitigating the Symptoms, by way of Precaution, to use Turpentine, but boil'd, as they call it, to render it less heating, and more astringent. The same is practis'd in the Sciatica, Palsy, and Gout; in which Cases, it is exhibited twice in a Week, either unwash'd, or wash'd in Water of Succory. The Quantity of an Hassle-nut, taken every Morning fasting, is highly commended, as we are told by *Avicenna*, in the Arthritis, and all other Diseases of the Joints; and no wonder it should help the Gout, since it is good for the Stone;



and these Diseases are near akin, so as to have the same continent Cause, or Matter, and often to pass, by Metathesis, one into the other.

Turpentine may be exhibited, 1. By itself, which they call *Oblates*. 2. In some aqueous Liquor, with a very small Quantity of the Yolk of an Egg, by which Addition it will represent a milky Liquor. 3. It may be a little inspissated, and reduced into Pills; but the two former Ways are best, because of the Evaporation of the Spirit. *Schroder*.

Observe here, first, that the true Turpentine is unknown in the Shops; and that the officinal Turpentine is either the Resin of the *Larix*, or the Resin of *Fir*, gather'd from the Tubercles of young *Fir*-trees.

Secondly, that the Smell of the true Turpentine remains in the Urine of those who take it; and is, in some manner, like the Smell of Violets. I have heard, says *C. Hoffman*, a Person affirm, that it was an Anodyne, of immediate Efficacy in Pains of the Pudenda.

In the Spring-time, the tender budding Shoots of the small Branches of the *Terebinthus* being broken off, as it is the Custom about *Montpelier*, and other Parts of *Languedoc*, as well as in other Countries, there distils from them a Milk, like that of the Fig-tree, which, being received and preserved in proper Vessels, becomes a most limpid, tenacious, and resinous Liquor; which, while it is new, or, to use *Pliny's* Expression, in Milt, if spilt upon a woollen Garment, makes no Stain, and, when wash'd off, leaves no Mark or Spot behind it; but it grows thick with Time, and cannot be wash'd off, without an Addition of the Yolk of an Egg. *Lob. de Balsamo*.

Turpentine distill'd, or Oil of Turpentine, is next to Oil of Balsam, or a little hotter; and is of Service in all cold Diseases, especially of the Nerves.

The distill'd Oil of Turpentine, taken inwardly, is of singular Efficacy in nephritic Pains. It is of extraordinary Service, also, in Contractions, Tensions, and Relaxations of the Nerves, being apply'd by way of Uction, and rub'd on the Parts affected, for a good while together, with an hot Hand; especially if it be mix'd and shaken together with some highly rectify'd Spirit of Wine.

Some there are, as *Schroder* tells us, who put Turpentine in their Beer, and let them ferment together, for their ordinary Drink, under Afflictions from the Stone, or Obstructions of the Viscera.

*Dioscorides* teaches a Method of preparing a Wine of Turpentine, from the bacciferous Branches of the *Terebinthus* being bruised and boil'd in Milt, which, being grown out of Use, is, therefore, omitted. The Antients, also, had so great a Value for the Asparagi, or young Shoots of the *Terebinthus*, as to reserve them for Use in Winter. *Raii Hist. Plant*.

The Bark and Leaves of the *Terebinthus* are very astringent, and useful in a Diarrhoea, provoke Urine, and stimulate to Venery. From this Tree distils that most laudable Kind of Resin, call'd *Turpentine*, being a resinous, transparent, sossish Substance, thicker than the Resin of the *Larix*, and brought from *Cyprus*, and *Chios*, or *Sio*. The common Turpentine is gather'd in *Germany* and *Norway*, from the wounded Trunks of young Pines and *Firs*, and is depurated by frequent Washings with Water.

The Turpentine of *Cyprus*, or *Chios*, is but seldom used, having no Place supply'd by what they call

*Terebinthina Veneta*, or Venice Turpentine, which is extracted from the Larch-tree. See *LARIX*. This Kind of Turpentine is a liquid Substance, of the Consistence of new Honey, of a yellowish Colour, an acrid and bitterish Taste, and a grateful and fragrant Smell.

Venice Turpentine is of Efficacy in the nephritic Colic, a Cough, Asthma, Ulcers of the Bladder and Kidneys, the Strangury, Gonorrhoea, Fluor Albus, and Wounds internal and external; taken in a larger Quantity than ordinary, it frequently gives a Stool. Externally, it is of Service in Diseases of the Nerves, and for discussing Tumors. It is, also, an Ingredient in Clysters vulnerary, anticolic, and antinephritic, to be injected into the Bladder, Uterus, or Intestines; and enters the Composition of most Plasters; for it promotes Suppuration; maturates and cures the Scabies, and other cutaneous Defections. *Hist. Plant. adjoipt. Boerhaav. Schroder*.

2. *Terebinthus*; peregrina; fructu majore; Pistachiis simili, eduli. C. B. P. 400.

3. *Terebinthus*; Indica; Theophrasti; Pistachia Dioscoridis. *Tournef. Inst.* 380. *Boerh. Ind. a.* 2. 173. *Nux Pistacia*. *Ollic. Park. Theat.* 1417. *Pistacia*. *Ger.* 1248. *Emac.* 1436. *J. B.* 1. 275. *Raii Hist.* 2. 1682. *Pistacia peregrina fructu racemoso sive Terebinthus Indica Theophrasti*. C. B. P. 401. THE PISTACHIO, or PISTIC NUT-TREE.

This is the fruit of a large Tree, with winged Leaves, like an Ash tree, but rounder-pointed. It bears Bunches of small white Flowers, to which succeed long-pointed Nuts, cover'd with a brown wrinkled Bark; under which is a white brittle Shell, including, in a reddish Skin, a greenish Kernel, of a pleasant sweet Taste. It grows in the Eastern Countries of *Persia* and *Turky*.

The Fruit is accounted nourishing and restorative, and good for weakly consumptive People; it opens Obstructions of the

Liver and Spleen, and is said to be a Provocative to Venery. *Miller's Bot. Off.*

Pistaches are grateful to the Stomach. *Dioscorides* and *Pliny* both affirm, that whether they are eaten, or bruised and taken in Wine, they are effectual against the Bites of venomous Reptiles; in other respects, their Virtues, they say, are the same with those of Pine-kernels.

*Galen* says, that Pistaches are of fine Parts, with something bitterish and scented; whence they open Obstructions, chiefly of the Liver, but, in some measure, of the Thorax, also, and Lungs; and that they afford but little Nourishment. But the Generality of the Moderns will have them to be highly nutritive, and stimulant to Venery; on account of which, they are recommended by the *Spanish*, *French*, and *Italian* Physicians, to be mix'd in Desserts, with other Things, of a comforting and restorative Nature: And so much is attributed to them, that there is scarce an analeptic Medicine without Pistaches.

The Oil of Pistaches, taken inwardly, is said, by *Matthiolus*, to ease internal Pains, proceeding from viscid Phlegm and Flatulencies. The same Author tells us, that it is effectual against Convulsions and the Palsy; and, taken inwardly, improves the generative Faculty. *Raii Hist. Plant*.

Pistaches are heating, moistening, attenuant, and aperitive. They are principally used in mucilaginous Infarctions of the Lungs, and Obstructions of the Liver; they strengthen the Stomach, repress a Nausea and Vomiting, excite an Appetite, and afford good Nutriment. *Dale from Schroder*.

*Miller* takes Notice of eight Species of the *Terebinthus*.

TEREBOTIN. By this Word, *Paracelsus*, probably, means Turpentine.

TEREBRA. A Chirurgical Instrument for perforating Bones, or for extracting extraneous hard Bodies, as Bullets, out of Wounds.

TEREDO. *Offic. Schrod.* 5. 347. THE WOOD-EATER.

There is a great Dispute among Authors about the *Teredo*, some making it one thing, some another. *Aldrovandus* makes four Kinds of *Teredo*; one Kind is found in Wood, another is called *Vermiculus*, a third *Thris*, and a fourth *Coffus*; to these, *Johnson*, from *Agricola*, adds a fifth, which, from its copper Colour, is call'd *Kupfferworm*. But we suppose that Worm with six Legs, from which is produced the *Scarabeus minor arborum*, commonly found in Trees, to be the *Teredo* of the Shops.

The Parts of this Insect in Use are the farinaceous Excrements, call'd POWDER OF POST. This Powder is drying, whence it is sprinkled, with good Success, on humid and watry Ulcers; and, for the same Reason, is in much Request among the good Women, for drying up the Excoriations of Infants. *Dale from Schroder*.

TEREDO is, also, a *Caries* of a Bone.

TEREGAM. H. M. The Name of a Fig-tree, which grows in *Malabar*, call'd *Ficus Malabarica foliis rigidis, fructu rotundo, lanuginoso, flavesciente, Cerasi Magnitudine*. *D. Comelin*.

It is a large Tree, thirty feet high, the Root of which, confused with Vinegar, prepared of the Coco-nut, and taken in a Morning fasting, is said to cool the Viscera. The Fruit is, also, extremely refrigerating.

TERENGIBIL, or TERENIABIN. The *Arabic* Name for Manna.

TERES MUSCULUS. There are two Muscles of the Os Humeri, which are call'd by this Name; the first is the

#### TERES MAJOR.

This is a long, thick, flat Muscle, situated a little obliquely between the inferior Angle of the Scapula, and the upper Part of the Arm. This Muscle, and the *Teres Minor*, are call'd round, though they are considerably broader than they are thick; because they come much nearer to that Figure, than any other Muscle which moves the Os Humeri on the Scapula.

It is fixed by its posterior fleshy Extremity in all the large angular Surface, on the Outside of the Scapula, in the inferior Costa of that Bone, and near the Angle. From thence it advances, with longitudinal Fibres, toward the upper Quarter of the Os Humeri, terminating in a broad flat Tendon, intermixed with some fleshy Fibres, which, at the upper Edge, are continued all the Way to the Insertion, lying in the same Place with the Tendon.

It is inserted, by its anterior Extremity, at the lower Part of the bony Ridge of the small Tuberosity, along the Edge of the Channel, almost opposite to, and sometimes a little lower than, the Insertion of the *Pectoralis major*. It lines the Cavity of the Channel by a tendinous Elongation, which joins that from the *Pectoralis*, and seems to be continued with it. This Insertion is below that of the *Latissimus Dorsi*, with which it communicates by a small Aponeurosis.

The Tendons of these two Muscles, the *Teres major* and *Latissimus Dorsi*, lie almost in the same Plane, as has been already observed; the upper Edge of the first running up a little Way on one Side the lower Edge of the latter, and the two Edges crossing each other in a small Degree. The Tendon of the *Latissimus Dorsi* lies behind, and covers that of the *Teres Major*.

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These two Tendons, near their Insertions, have a ligamentary Frænum belonging to them, which runs down from the Insertion of the *Subscapularis*, and is inserted below that of the *Teres major*. It covers the two Tendons, and keeps them close to the Bone.

The *Teres major*, by being inserted in the Os Humeri, in a Direction parallel to the *Latissimus Dorsi*, becomes a Congener to the superior and posterior Portion of that Muscle; and, accordingly, moves the Os Humeri in the same manner with it. It turns the Bone round its Axis, when the fore Arm is carried behind the Back.

It, also, pulls the Arm directly backward, without moving it round its Axis. But neither this Muscle, nor the *Latissimus Dorsi*, can perform this simple Motion, because of the incurvated Direction of their Tendons, without the Assistance of other Muscles, which, like Antagonists, prevent the Rotation already mention'd; and of this Number is the *Teres minor*.

The Nearness of the Tendon of this Muscle to that of the *Latissimus Dorsi* deserves our Attention. They are both inserted, according to their Breadth, in the same Line, along the Edge of the bony Chanel of the Os Humeri, opposite to the Insertion of the *Pectoralis major*, in the other Edge of the same Chanel. These two Tendons cross each other in the same Plane; that of the *Teres major* running obliquely from above downward; and that of the *Latissimus Dorsi*, obliquely from below upward.

By this Disposition, these two Tendons resemble, in a great measure, the Duplication, or Fold, of the Tendon of the *Pectoralis Major*; and, therefore, the *Teres Major* may become a particular Antagonist to the superior Portion of the *Pectoralis Major*, and the *Latissimus Dorsi* to the inferior Portion; and both these Muscles, taken together, may be a common Antagonist to the *Pectoralis major*, when that whole Muscle acts at the same time.

I before observed, that these two Tendons were bound down by a ligamentary Frænum, which, from the Insertion of the *Subscapularis*, runs down below that of the *Teres major*; and that this Frænum covers the two Tendons, and braces them down close to the Bone. The Use of this Frænum seems to be, to prevent the Separation of the two Tendons from the Edge of the Groove, in violent Rotations of the Arm.

The *Teres major* may, also, move the *Scapula* on the Os Humeri, by drawing the inferior Angle downward, and bringing it nearer the Arm; but, in order to this, the Arm must be kept immoveable, by some considerable Force or Resistance; as when, in standing with the whole Arm hanging down, the Hand supports a great Weight. By this Action, the *Teres major* may, also, assist in raising the Shoulder, or in hindering it from sinking.

The second is the

## TERES MINOR.

This is a very fleshy Muscle, resembling the *Teres major*, but narrow and shorter. It lies above the last-named Muscle, between the Costa inferior of the *Scapula*, and the Head of the Os Humeri.

It is fixed by one End to all the middle Part of the inferior Costa of the *Scapula*, and to the long particular Surface immediately above that Costa, reaching from the great angular Surface near the Neck of the Bone. From thence it runs wholly fleshy, till it changes into a flat Tendon, which is inserted in the posterior or inferior Surface of the great Tuberosity of the Head of the Bone, and, also, a little lower down.

It adheres very closely to the lower Edge of the *Infra-spina-zus*, and the Tendons of these two Muscles are united; for which Reason the Ancients confounded them together, and did not look upon this as a particular Muscle. It is covered by the *Deltoides*.

The *Teres minor* may turn the Arm, when depressed round its Axis, from before outward, as it happens, when the fore Arm, being bent, and applied to the lower Part of the Breast, is removed from thence, without moving the Elbow from the Side: This Rotation is in a contrary Direction to that performed by the *Subscapularis* and *Teres major*.

This Muscle may, also, pull the Arm directly backward, whether raised or depressed; but, in order to this, the *Subscapularis* must act at the same time as a Moderator, to prevent the Rotation. *Winslow's Anatomy*.

TERETRON, *τέρετρον*. The same as *TEREBRA*, or *TEREBILLA*.

TERFEZ. A Sort of white Truffle found in the *Numidian* Sands. It is said to be very nourishing, if roasted in the Embers, or boiled in Milk; to be good for the Stomach; to restore decay'd Strength; and to increase the seminal Juices.

TERMINTHI, *τέρμινθοι*, are expounded in *Galen's Exegesis*, δι τῶν τῶν τέρμινθου κατὰ τὴν παραπλήσιοι καὶ τὸ δέμα συνιστάμενοι ὡς ἐδόν οἱ ὄγκοι, "preternatural Tumors seated in the Skin, and nearly resembling the Fruit of the Turpentine-tree." In these Words *Galen* seems to have an Eye to 2 *Epid.* where it is said κατέπεσε ἐν κνήμῃ τέρμινθος ἰγνύοντο, "and afterwards Terminthi arose in his Legs." *Hippocrates* uses the Word, also, *Lib. περὶ χυμῶν*, where he says, καὶ τέρμινθοισιν ἀλίσκονται, "nor are seized with Terminthi;"

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which Words are repeated 6 *Epid. Sect. 3. Aph. 23.* where *Galen*, on the Place, says, καὶ τὸ τῶν τέρμινθων δ' ὄργανα μελάνων τινῶν ἐκφυμμάτων, &c. "By the Name *Terminthi*, we are to understand a kind of black Tubercles arising chiefly in the Legs, in Colour and Size like the Fruit of the *Terebinthus*. The Comment in *Lib. 3. de Humor.* ascribed to *Galen*, says, *Terminthi* are round Eminences seated in the Skin, of a black Colour inclining to green, and like the Fruit of the Turpentine-tree; which Definition seems to be taken from *Dioscorides Alexandrinus*, as quoted by *Panlus*, *Lib. 4. Cap. 24.* when he calls these Tumors *Terebinthi*, *τέρεβινθοι*. The *Terminthus* is, by some, described as follows; *τέρμινθος ἐστὶν ἀπόστημα περὶ τὴν ἐπιφανείαν γινόμενον, μετὰ φλυκταινάσεως, ἥ ῥα γείσιν ἰχὼρ τις ἀπορρέει, καὶ ἡ ὑποκειμένη σὰρξ καλῶς ἐξημερὴν φαίνεται* "A *Terminthus* is an Abscess formed in the Skin with a Pustule, which Pustule breaking, an Ichor is discharged, and the subjacent Flesh appears perforated." This Description is taken from a Scholium annexed to a manuscript Copy of *Hippocrates*, in the King's Library at *Paris*; and comes very near to that of *Oribasius*, *Synops. Lib. 7. Cap. 36.* transcribed by *Panlus*, in the Beginning of his Chapter before-quoted: "*Oribasius*, he there says, makes the *Terminthus* a kind of Tubercle with a black Phlyctæna (Pustule), which breaking, the subjacent Part appears as if abraded." *τέρμινθος* is defined by *Pollux*, *Lib. 4. Cap. 25.* φῦμα φλύκταιναν ἔχον, "a Tubercle with a Pustule." The Cure of a *Terminthus* is directed by *Aetius* to be managed in the same manner as that of the *EPINYCTIDES*. See *EPINYCTIS*.

There are two Sorts of painful Tubercles, says *Wissman*, which I have met with in my Practice, they are taken notice of by the Ancients, under the Names of *Epinyctis* and *Terminthus* a Couple of angry Pustules, affecting the Skin in the Arms, Hands, and Thighs. They do not differ much one from another; so may well be joined together.

The *Epinyctis* is of the Bigness of a Lupin, of a dusky red, and sometimes of a livid pale Colour, with a great Inflammation and Pain. It dischargeth, first, a Sanies, then a bloody Matter. The *Terminthus* is somewhat less, of a blackish Colour, it breaks and gleans, and within a Day or two the Pustule separates, and comes away in a Slough, and from that time it digests and heals.

They both proceed from an excessive Heat in the Blood; but are without Malignity and Danger, and cure with little Difficulty, if there be no Error committed in Surgery.

The Cure consists in Evacuation by Bleeding, Purging, and Regulation of Diet, as in a Phlegmon.

The external Applications, commended to us by the Ancients, are Leaves of Hemlock, Nightshade, and Plantain, with fine Flour; or apply Raisins cleaned and bruised; they may, also, be washed with Salt-water, to dry up the Matter, and prevent Erosion; afterwards dress them with a Mixture of equal Parts of native Sulphur, and Litharge of Silver with Wine. I never was consulted in these, till they were arrived at their Height; and then found Anodynes of most Use, and afterwards healed them with Ointment of Turky.

A Maid came recommended to me with an *Epinyctis*, on the Inside of her Arm, of the Bigness of the greater Sort of Lupins, of a livid Colour, with a small acute Pustule rising up in the Middle. It was accompanied with great Inflammation, affecting the Tendons with Hardness in the Joint. I prescribed her a Cataplasim of the Mucilage of Psyllum, Marshmallows, and Linseed; and embrocated the Parts with Oil of Roses and Chamomile. By this the Tubercle was brought near Suppuration, the Pustule first broke, and discharged a thin Sanies. I dressed it with the Yolk of an Egg, and, about two Days after, the Tubercle itself thrust out a bloody Matter. I dressed it with Basilicon, added to the Yolk of an Egg, and applied Cerate of Marshmallows, and continued the Embrocation. The Matter, from that time, was daily better digested, and the Pain diminished; it was healed with Unguentum Diapompholygos, and the Plaster of B. le.

A young Gentleman, having such another on the Outside of his Wrist, was recommended to somebody who opened it by Incision; but from that time it became exceedingly painful. He came to me with it hard and dry, and it had communicated its Anguish all along the Tendons and Nerves, to the Arm-pit, with several Glands. I embrocated the Arm from the Arm-pit, to the Knuckles of that Hand, with Oil of Roses and Vinegar, and applied Plaster of Bole upon those Glands. To the Tubercle I applied Basilicon, with Oil of Roses, spread indifferently thick in the Form of a Plaster, and dressed it to twice a Day. I proposed the next Morning, to have let him Blood; but he was easier; and the same Night I felt the Tubercle softer, and saw a bloody Matter thrust out. From that time it digested better, and the Accidents diminished; in four or five Days, the Glands resolved, and the Ulcer was cured by the Application of Ointment of Turky, &c.

A Gentlewoman, about forty Years of Age, had a *Terminthus* on the Knuckle leading to the fore Finger, which I was called to see. It was a small Tubercle inflamed round its Basis, having a black Head, and a long inflamed Streak passing from it to a Fontanel, which she had on that Arm. Whether it ran upward from the Pustule to the Fontanel, and affected it, or descended from



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it to the Pustule, I know not: However it was, there were Marks of Communication from one to the other, and both were painful, and the Patient was indisposed with a Fever. In the Fontanel there was a small Orange-pea, which I cast out, and put in a common one, and dressed it with Liniments, and a Plaister to retain them on. I dressed the Pustule with Basilicon with the Yolk of Egg, and applied the Cerate of Deer's Suet. It suppurated the next Day, and the Head of it cast off in a Slough. I clipped off the loose Skin from it, and dressed it with Ointment of Tutty, and in five or six Days cicatrized it. During the Cure, the Patient was afflicted with a Diarrhoea, which was purged off: After which she was hot and feverish, and troubled with a Rheumatism; for which she was let Blood, and cured. *Wife-man's Surgery.*

TERNA. The same as IMPETIGO, or MENTAGRA. *Castellus* from *Fallopins*.

TERNATEA.

The Characters are,

It hath a papilionaceous (or Pea-bloom) Flower, whose Standard almost hides the Keel, and the Wings; the Pointal afterwards becomes a Pod, which opens two Ways, and is filled with Kidney-shaped Seeds. To these Notes should be added, that the Leaves are winged, and are terminated by an odd Lobe.

*Miller* mentions four Sorts of *Ternatea*; which are,

1. Ternatea flore simplici, cœruleo. *Acad. Reg. Scien.*

2. Ternatea flore pleno, cœruleo. *Acad. Reg. Scien.*

3. Ternatea flore simplici albido. *Acad. Reg. Scien.*

4. Ternatea Americana, perennis, flore cœruleo. *Houff.*

The Name which *Dr. Tournefort* has given to this Genus of Plants is, from the Place whence these Plants were first brought, which is one of the *Molucca* Islands, called *Ternate*.

The Flowers of the first and second Sorts are of a very deep-blue Colour; and if put in Water, and macerated, will dye the Water almost as blue as Indigo.

The third Sort differs from the first, only in the Colour of the Flower.

The fourth Sort was discovered by the late *Dr. William Houstoun*, in *Jamaica*, from whence he sent the Seeds to *England*. *Miller's Dictionary.*

TERNIABIN. The same as TERENGIBIL.

TERRA, γῆ. Earth. See ANALYSIS.

Ἡ κεραμικὴ, *Ge ceramice*, from *κεραμεύς*, a Potter, in *Hippocrates*, *Lib. de intern. Affect.* is *Terra figularis*, or *figulina*, Pottery Clay. *Lib. 1. de Morb.* he calls it γῆ κεραμικῆς, and in the Beginning of *Lib. 3.* reckons it among Refrigerants. *Galen*, in his *Exegesis*, expounds it by ἀργίλη, ARGILLA, Clay.

Ἡ σμικτὶς ἢ σμικτικὴ, *Ge smectis*, five *Smectica*, from *σμίχαι*, to absterge, is expounded in *Galen's Exegesis*, and, also, in *Erotian*, by κίμαλια, Cimolia (Terra). The Words occur, *Lib. 2. περὶ ὑναικ.* and *Lib. de Fistulis*, where he advises anointing the Arms with this Earth.

Ἡ μελανα ἢ Σάριν, *Ge melena* or *Samie*, black Earth of *Samor*, is advised by *Hippocrates*, *Lib. περὶ ὑναικ. εὔσ.* to be taken inwardly for cleansing of the Uterus.

Ἡ χαλκίτις, *Ge Chalcitis*, according to *Galen*, in his *Exegesis*, means no more than simply CHALCITIS. He seems to have regard to that Place, *Lib. de Fistulis*, where we read *συνμίζει γῆ* [for γῆ] χαλκίτιδι ἴσον, "mixing with it an equal Quantity of *Chalcitis*."

Ἡ ἐρετρίς ἢ ἐρετρίαις, *Ge Eretris* seu *Eretrias*, *Terra Eretris*, *Eretris*, *Eretrias*, is directed by *Hippocrates*, *Lib. 3. de Morb.* to be rubbed on the Breast, in order to discover in what Part of the Thorax the Pus is seated.

Ἡ ψιλὴ, *Ge psile*, *Lib. de Aer. Loc. & Aq.* is a bare Soil, opposed to γῆ δασύια, a Soil overgrown with Trees and Bushes.

Ἡ ἐν κοίλῳ ἢ περὶ γῆ, *Ge en calo et pnigere*, an hollow, depressed, and scorched Soil, as opposed to γῆ μετεωρὸς ἢ ψυχρῇ, *Ge meteoros et psychre*, an high, or elevated, and cold Soil.

## Of the Differences of Earth.

By *Terra*, or *Earth*, is universally understood that Substance alone, which, being worked or kneaded with Liquor, becomes a Clay. For what *Earth* is found among Metals, will not admit of *Liquefaction*; by which Term I mean a Dissolution of the whole Substance into a Liquor; as, by *Madesation*, an Irrigation only of the Superficies, the Humour not penetrating to the Depth of the Body.

All *Earth* is of a drying Quality, because the Substance of it is naturally hard; and where it is wholly free from any Mixture of igneous Particles, it dries in a very gentle manner, without the least Corrosion. To render it thus qualify'd, Washing is conducive; but some *Earths* need no Washing; others, on the contrary, require two or three Washings. Now, if you are acute and well-skilled in the Sense of Tasting, you may judge yourself, whether an *Earth* requires Washing, or not, from its Degree of Acrimony, or Astringency. But, since it is impossible to find a Substance absolutely simple and unmixed, we are to consider this compounded Matter, with regard to its Qualities, such as various Degrees of Lightness or Ponderosity, and, also, the Differences of Tastes. If, for Example, it appears to be

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astringent, the more it participates of Astringency, the more it has of Coldness; if it betrays an acrimonious Quality, its Degree of Heat will be found, in proportion to its Acrimony. An *Earth* is *light*, when, through all its Contexture, it participates much of an aereal Substance; on the contrary, it is found to be *ponderous*, more or less in proportion to its consisting more or less of mere *Earth*. An *Earth* of an hot Quality has an heating Effect; a cold and astringent *Earth* refrigerates and repels; what is endued with an absterlive Virtue, without any manifest Heat, dries in a gentle manner. An *Earth* possessed of a considerable Degree of Glutinousness is not abstergent, but is the better qualify'd by its Glutinosity for an Emplastic, tho' by no means for an Abstergent, without an Addition of Acrimony to correct its Viscidness, as we see in an Egg.

These are necessary Observations, and such as will take place throughout the whole *Materia Medica*; for many imagine, that all burnt Things become colder than they were before; and some, on the other hand, think the Heat in burnt Things to be increased; whereas both are in an Error. All acrimonious Things, indeed, lose much of their Heat by Burning; but all which are not acrimonious, acquire a Heat by Burning. But nothing, after Burning, becomes perfectly cold; for there still remain some igneous and very fine Particles; and these Particles are what are deposited by burnt Substances in Washing; for what remains afterwards is a cold earthy Substance, which has a Virtue of drying without Corrosiveness; but the Water in which the Drug is washed, acquires the heating Quality of those igneous and fine Particles.

The Method of washing all Kinds of Earth is first to work it in Water, in which is no manifest medicinal Quality; and, when the Mud is subsided, to pour off the Water; and, after that, to cleanse it from the Gravel and Sand, which sink to the Bottom. *Aetius, Tetrab. 1. Serm. 2. Cap. 1.*

## Of the Medicinal Uses of the Earth of Fields.

The *Earth* of all cultivated Fields, which are of a fat Soil, is effectual for the Cure of all Parts which require Drying, for which Purpose they use it in *Alexandria* and *Egypt*; and I have seen, in *Alexandria*, Persons labouring under the Dropsy, and Disorders of the Spleen, making use of the Mud of the *Egyptian* Soil. Many, by applying Cataplasms of this Mud to the Calves of their Legs, to their Thighs, Elbows, Arms, Back, Sides, and Breast, have found Relief. The same cures inveterate Inflammations, and lax Tumors; and I know some, who, from an immoderate Evacuation by the Haemorrhoids, were become aqueous and hydropical in the whole Habit of their Body, manifestly and greatly benefited thereby. Some, by the same means, have been perfectly cured of inveterate Pains, which have been fixed in one Place. Thus far *Galen*: What follows, is from *Strato*.

For an inveterate Pain of the Head: Take the Sordes of Baths, or of hot Water, and mix them with black Earth washed; or work the Earth in a Decoction of Heads of Roses; or add to the Earth a Shard or Fragment of a Vinegar-pot, triturated with a Decoction of Bay; or mix the Earth with the Tile of a Clibanus (see CLIBANUS); and pour thereto a Decoction of Sampsuchus.

For an Eruption of Pustules from the Scabies and Impetigo: Take black Earth, and work it with a Decoction of Almonds, or bitter Lupines; or wash out a Vinegar-pot with a Decoction of Rue, and with the same work the Earth; or pound the Globules of Salt, which are found in the Bottom of Vessels which hold Garum, and mix them with the Earth, and use it as an effectual Remedy; or mix the Dung of Pigeons with the Earth, and work them with a Decoction of the *Halicacabus*.

For an inveterate Cough, with a vitiated Habit of Body: Take Earth, and work it with a Decoction of Calves Bones, and therewith anoint the Breast; or wash out an Honey-pot with the same Liquor, and with it work the Earth: You may, also, work it with a Decoction of Cumin, Nigella, and Sampsuchus; and so use it.

For Disorders of the Spleen: Take Ashes of Vine-branches, and the grumous Lees of Wine, and work them with Earth; or work the Earth with a Decoction of Leaves of the Capparis; or mix the Recrements, or Drofs, of Silver, with Clay; and so use it: Or work the Clay with a Decoction of the *Serapias Tritesticularis*.

For the Dropsy: Pound the old Shards or Fragments of a Vessel which holds Brine, and mix them with Earth; or mix the Earth with Garum of Pork or Veal; or boil Sampsuchus in Seawater, and work the Earth with it; or beat Salt-meats in a Decoction of bitter Lupines, and mix them with the Earth; or mix burnt Alum, and the Ashes of Pennyroyal, with Clay, and work them in Oxymel: Or take dry'd Cow-dung; triturate it, and mix it with the Earth, and work them in like manner in Oxymel.

For the Sciatica, and all Coldnesses of the nervous Parts: Boil Sampsuchus in a Decoction of Calves Bones; then work in it white Earth, and so use it; or boil an Eel in Salt and Nitre, and mix the Earth with the Decoction; or mix it with strigmentitious Sordes, (see STRIGMENTUM) and Quick-lime; or work the Earth in a Decoction of Garlick or Leeks, and then use it; or take Costus, Cassia, Juncus odoratus, Alpalathus, Xylobalsamum, and Sampsuchus; bruise them, and boil them in Water and Oil, and then mix them with Clay, and so use them; or pound



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pound Goats-dung and Cow-dung, with the Sordes of Ceratum Rhabbaninum, and mix them with the Earth.

For the Gout: Let the Patient be covered from the Head to the Groin, with the forementioned Compositions; and from the Groin to the very Nails of the Toes, with what follows: Burn the hinder Feet of a Calf, together with the Hoofs; triturate them, and mix them with Earth; or bruise the Stone *Leucographis* in Water in which red-hot Iron has been often quench'd; add thereto an Ounce of Alum, and work them with Earth; or work the Earth in a Decoction of the Leaves of *Cyprus*; or boil Galls till they are dry, and work the Earth with the Decoction. Another Prescription, for the same Purpose, is as follows: Take of liquid Alum, one Ounce; scissile Alum, one Ounce; six Ounces of Gum Arabic; nine Ounces of Cerufs; five Ounces of Melaneria; six Ounces of Misy; twenty-four Ounces of Oil of Myrtles, or *Oleum Sicinum*; bruise them together; then work them with Earth, and so use them: Or take of Acacia, Copperas, each two Drams; bruise them in Vinegar, then dry them, and mix them with Earth: Or take of Alum, Spuma Argenti, Misy roasted, each four Drams; mix them with liquid Cerate of Myrtle, and work the Whole with Earth: Or take of Cerufs, Spuma Argenti, of each twenty-four Drams; Oil of Myrtle, thirty-four Drams; Water, a sufficient Quantity: Work the Whole with Earth, and so use it. Another Prescription by which the Governor *Philinus* was cured, is as follows: Take of Juice of Mulberries, scissile Alum, Eastern Privet, the Vitex, Galls, Saffron, the Fruit of the Tamarisk, Frankincense, of each six Ounces: Reduce them all to a very fine Powder, and, when it is necessary to use it, dilute the same in Water, and work it with Earth. All that is to be said farther of this Kind of Earth is, that it requires not to be washed, but only to be watered and cherished with the Decoction of unripe Peaches. *Aetius, Tetrab. 1. Serm. 2. Cap. 3.*

TERRA	}	See	AMPELITES.	AMPELITES TERRA.
			ARGILLACEA.	ARGILLA.
			CHIA.	CHIA.
			CREPOLA.	SONCHUS; LAEVIS; ANGU-
				STIFOLIUS.
			ERETRIA.	ERETRIA.
			FABRILIS.	RUBRICA FABRILIS.
			GLANDES.	LATHYRUS; ARVENSIS;
				REPENS; TUBEROSUS.
			GOLTBERGENSIS.	BOLUS CANDIDUS.

## TERRA JAPONICA.

*Cachou*, or *Terra Japonica*, according to Mr. Caen, Doctor of Physic, of the Faculty of *Paris*, suitably to what was communicated to him by one of his Friends, is an Earth that is found in the *Lewant*, where it is called *Masquiqui*, which is usually met withal upon the highest Mountains, where the Cedars grow, under the Roots of which this Earth is found; which of itself is very hard, and in a Lump. To lose nothing of this Earth, the Natives, call'd *Algonquains*, gather it up, Sand and all together, and wet it with River-water, and make it into a Paste, drying it in the Sun to the Hardness we see it of. The Natives always carry it about them, and use it for the Pain of the Stomach: They, also, apply it outwardly like an Ointment upon the Region of the Stomach.

Tho' this Description of *Cachou* appears not very conformable to Truth, because there is no Probability of its being an Earth; yet, as the Person, who gave this Description to Mr. Caen, assured him that it was so, and soasmuch as 'tis called in *Latin*, *Terra Japonica*, I was oblig'd to rank this in the Class of Earths, and leave it to those to determine what it is, who understood more of it than I do: All I shall say is, that you ought to chuse *Cachou* of a tawny Red without, and of a clear Red within, the brightest and least burnt that can be.

*Cachou* is a very bitter Drug, and of an unpleasant Taste when taken in the Mouth. It is usual to reduce it to a fine Powder, and to mix it with Ambergrise, which, with the Mucilage of Gum Tragacanth, is made up into a Paste, and formed into little Pellets, in Colour and Figure having the Resemblance of Mousse's Dung; and the smaller these Troches are made, the more valuable are they.

The Use of *Cachou*, whole or prepared, is to strengthen the Stomach, and to make the Breath sweet; and, in short, it is one of the best Drugs we have, and yet at this time the least used; which proceeds from the great Use of Tea and Coffee, tho *Cachou* is of much greater Virtues than either of them.

As *Cachou* is very unpleasant to the Palate, especially when first put into the Mouth; therefore some People, besides the Ambergrise, mix Sugar with it. *Pomet.*

*Terra Japonica*, according to another Account, is the inspissated Juice of the *Arca* or *Fausel* [See *ARCA*]; and is, also, called *Catechu* in the Shops. This is a gummy, indurated Substance, of a redish Colour, inclining to black; of an astringent and austere Taste at first, but afterwards sweet and grateful, and void of Smell. There are two Sorts of it; one purer, which, slightly tasted, melts, as it were, on the Tongue; the other harder, and less pure, and consequently of but little Use; and this perhaps led *Schroder* into an Error to mistake it for an Earth.

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It is astringent; corroborates the Stomach; removes a Nausea; excites an Appetite; represses Vomiting; and stops Fluxes of the Belly, of the Menfes, and Hemorrhages.

The Learned are not agreed about the exotic Drug, called *Terra Japonica*, and *Catechu*, or *Caetchu*: Some, who take it for a true and genuine Species of Earth, as its Name imports, rank it among Minerals; others will have it to be a compound Substance, participating of a vitriolic Nature; and others there are, who, and indeed rightly, reckon it in the Class of vegetable Substances, and take it for an inspissated Juice.

This *Catechu* is easily dissolved in Water, incorporates with it, and communicates to it a red Tincture, as do many other vegetable inspissated Juices and Extracts: Besides, it is not separated by Filtration, as Earths usually are; but passes the Filtre with the Water; and is, moreover, by Calcination, perfectly converted into Ashes, which Earths are not. That it participates not of a vitriolic Nature, will abundantly appear from the following Experiments: The first is, that no vitriolic Salt can be separated from it. Secondly, The Mixture of an Alkali with it excites or produces not the least Effervescence or Precipitation. And, lastly, a Solution of the same, with the Addition of any kind of vitriolic Substance, becomes an Ink.

*Garcias*, and others after him, will have the *Catechu* to be the *Lycium* of *Dioscorides*; but are contradicted by *Clusius* and *Veslingius*, because the Trees which yield the *Lycium*, and the *Catechu*, are different in the Shape and Size of their Leaves and Fruits. Some assert it to be the inspissated Juice or Extract of the Fruit called *Anacardium Occidentale*, or *occidental Anacardium*, because of the seeming Affinity of the Names, that Fruit being called *Cajou*, and *Catzu*. *Cleyer* affirms it to be the Extract of the oriental Acacia, a Plant much like the Tamarind. *Paulus Ammannus* says, it is an artificial Composition, prepared of an Extract of *Indian Liquorice*, *Indian Calamus Aromaticus*, and the Juice of the *Arca*, which gives it its purple Colour. And, lastly, *J. Orho Helbicus*, a Person very well-skilled in *East Indian* Simples, informs us, that it is extracted from a kind of small, hard, resinous, astringent Fruit, which hangs in a sort of Clusters. This Fruit, he says, with the Leaves of *Be el*, and *Lime*, are used over all *India*, in Chewing, for cleansing the Mouth; and is no other than what the Inhabitants of *Java* call *Fausel*, and those of *Malaya Pynang*. *Dale* declares himself of this last Opinion. The Fruit of this Tree is, also, of singular Use in curing the Scrophula, correcting the Blood, and altering noxious Humours; it rectifies a disordered Liver and Spleen, restores the digestive Faculty, and changes the whole Habit of the Body for the better.

It is to be observed, first, that the immature Fruit induces a Vertigo, like an Ebriety contracted from Wine. Secondly, that our *London* Druggists, by the Name of *Terra Japonica*, understand the Extract by itself, as it is imported among us; but, by *Catechu*, they mean a Composition of this Extract, Musk, Ambergrise, and other Ingredients.

TERRA	}	See	LEMNIA.	LEMNIA TERRA.
			LIVONICA.	TERRA SIGILLATA LIVO-
			MELITAEA.	NICA.
			MERITA.	CRETA.

TERRA NOCERIANA. *Mont. Exot. 14. Terra Bezoartia de Nocera, Species de Terra Lemnia. Boccon. Mus. di Puc. p. 61. EARTH OF NOCERA.*

It is a white Kind of Earth found about *Nocera*, of an alexipharmic Quality, and of great Efficacy in malignant Fevers, and Heat of Urine. *Bocconi.* It is an Astringent, and an Edulcorant, or Sweetener. *Mont.*

TERRA PNIGITES. See PNIGITES.

TERRA PORTUGALLICA. EARTH OF PORTUGAL.

It is a redish Earth, inclining to a Rose-colour, and of a styptic and astringent Quality, so as to adhere to the Tongue; it is made up into little Cakes, with the Figure of a Rose stamp'd upon them. This Earth is highly styptic and astringent, and of Efficacy in Fluxes of the Belly.

TERRA	}	See	RUBRICA.	RUBRICA FABRILIS.
			SAMIA.	SAMIA TERRA.
			SICULA.	BEZOAR MINERALE.
			SELINUSIA.	CRETA SELINUSIA.

TERRA SIGILLATA. There are a great Number of sealed Earths mentioned by Pharmaceutical Writers.

1. *Terra Silesiaca.* *Offic. Terra Sigillata vulgo, sive Terra Strigensis.* *Terra Sigillata Germanica lutea Strigensis dicta.* *Schrod 3. 317. Sigillata Strigoniana.* *Charlt. Foss. 5. Terra Silesiaca sigillata qui Chymicis Axungia Solis dicitur.* *Ejusd 6. Terra Sigillata Silesiaca, sive Terra Sigillata Germanica, Sigillum Strigoniense, Axungia Solis Chymicorum.* *Worm. 12. Terra Sigillata Silesiaca.* *Hoffm. Paral. Offic. 664. Terra Sigillata Silesiana.* *Imp. Hist. Nat. 128. Terra Sigillata Strigoniensis.* *Schwenck. Fossil. 395. Bolus Silesianus.* *Calc. Mus. 110. SEALED EARTH OF STRIGA.*

It is of a luteous, inclining to a bright-yellow Colour, fat, viscous; and runs abroad like Butter in Water, or in the Mouth. It is generated in the Gold Mines of *Mons Aentus*, or *St. George*, near *Strigonium*, a Town in the Duchy of *Swidnitz*, among very hard Rocks.



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Rocks. Hence it is digged, and prepared with the greatest Care, by Direction of the Magistrates; and reduced into little orbicular Masses, which are impressed with a Seal, having the Figure of the different Prominences of the Mountain, two cross Keys, a Buckler, and on the Right a Star. Under the Mountain are the Words, *Terra Sigillata Montis Acuti*. *Wormius* mentions this Earth under the Distinction of red-coloured Earth.

It is effectual in an *Hæmoptoe*, *Phthisis*, Ulcers of the Lungs, and *Hæmorrhages* of all Kinds; and represses a *Dysentery*, and all other Fluxes of the Belly. *Schwenckfeld*. It is highly commended by *Sennertus*, *Lib. de Pesse*.

2. *Terra Sigillata alba & rubra magni Ducis*. *Mont. Exot.* 13. WHITE AND RED SEALED EARTH OF TUSCANY.

It is said to be an *Astringent*, and an *Edulcorant*, or *Sweetener*. *Monti*.

3. *Terra Vitriolata sigillanda*. *M. Hoffm. Flor. Altdorff*.

This Earth is taken out of a subterraneous Place, called *DAK SEIKLOCK*, in the Territory of *Welden*. It is like the *Terra Silesiaca*, and has been found by a Multitude of Experiments to be of the same Virtue in malignant Fevers, as we are assured by *C. Hoffmann*.

4. *Terra Turrica*. *Offic. Terra Sigillata Turrica*. *Schrod.* 317. *Pastilli Turcici Characteristius insigniti*. *Worm.* 9. TURKEY EARTH.

The Inside of the Mass is all of an Ash-colour, the Outside red, answering in no respect to the *Terra Lemnia*, tho' it is supposed to have the same Virtues; and is commonly sold for *Terra Lemnia*.

5. *Terra Sigillata Livonica*. *Offic. Worm.* 12. *Charlt. Foss.* 6. SEALED EARTH OF LIVONIA.

It is redder than the *Silesian Earth*, and is very astringent, whence it is recommended in *Dysenteries*, *Diarrhoeas*, and other Kinds of Fluxes.

In the German Shops, some other sealed Earths are to be met with; of which the *Terra Strigoniensis*, and *Lignitzenfis*, are the principal. The former, termed by the German Writers, *Axungia*, and *Medulla Solis*, is of a yellow Colour, fat like Soap, and melts in Water, or when held in the Mouth. It is dug in the Clefts of hard Rocks, in the Hill of *St. George*, among the Gold Mines near *Strigomum*, in *Hungary*. The Magistrates take a great deal of Care, that it be duly prepared; and, being formed into little Balls, it is marked with the Seal of the Town, and believed to be impregnated with the Sulphur of Gold. The *Terra Lignitzenfis*, or *Goldabengensis*, called *Axungia*, and *Medulla Lune*, is of a white Ash-colour, and imagined to arise from Silver. Both these Earths are said to be useful in malignant Fevers, the Plague, *Dysentery*, *Diarrhoea*, and the Bites of venomous Animals. They operate by Sweat; and the Dose is between half a Dram, and two Drams. *Geoffroy*.

TERRA	{	SILESIACA.	} Sec	TERRA SIGILLATA.
		STRIGONENSIS.		TERRA SIGILLATA.
		TRIPOLITANA		ALANA TERRA.
		TURCICA.		TERRA SIGILLATA.
		VITRIOLATA		TERRA SIGILLATA.

TERRIFICATIO. A Coalition of the earthy Particles, in Fermentation.

TERROR. A Fright. This is the Cause of many Distempers, as *Faintings*, *Epilepsies*, *Convulsions*, *Palpitations*, and sometimes of Death. And it is esteem'd a Remedy for some Disorders, as the *Hiccup*, and *Chin-cough*; and *Horace* mentions a Fright as a Remedy for a *Lethargy*.

TERTHRON, *τέρθρον*. *Hippocrates*, who was an Islander, travel'd much by Sea, and was, in all Probability, well acquainted with Shipping, sometimes makes use of naval Terms, and takes Metaphors from the Terms of Seamen. Of this we have an Instance in the Word which is the Subject of this Article.

*Tertbron*, *τέρθρον*, "properly signifies, as *Galen* says in his *Exegesis*, the extreme Part of the Sail-yard; whence the Ropes which reach to the Extremities of the Sail, are call'd *Tertbrini* *τέρθριον*. But *Hippocrates*, in his second Book *de Morb. Mulieb.* where he says, *ἐν τῷ ἐκτέλει τὸ τέρθρον ἢ τὸ πᾶσι*, since "here is the *Tertbron* of the Disease, means as if he should say, "Here is the utmost Pitch and Extremity of the Disease, and "what requires all our Care." In the Place here indicated by *Galen*, all the Copies most corruptly read *τὸ σκεῦος* (*stereon*), "the Solidity;" for tho' the Strength and confirmed State of the Disease may be included in the Expression, yet the Elegance of the Expression is eluded. *Erotian*, also, hints at this Place, when he says, that, "the *Tertbron* of a Disease is put *ἐν τῷ τέρθει*, "instead of the End;" and he adds, that the Antients called the End or Extremity of a thing *Tertbron*, and confirms it by the Authority of *Euripides* and *Apollodorus*. According to *Hesychius*, *Tertbron* is a Name for the Main-sail; but some, he says, so call the End of the Sail-yard [*Virgil* calls the Ends *Antenne Cornua*], and the Roof of an House: And with some it signifies the Extremity and Height; and this last Sense agrees with *Galen's* Explanation.

TERTIANA FEBRIS. A Tertian Fever.

No Fever so exactly manifests the Nature and Genius of that general febrile Commotion, which preys upon the Vessels, and

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nervous Parts, and is, by way of Eminence, called *ἥγος* by *Hippocrates*, and the *Greeks*, as that commonly called a *Tertian Fever*; which rages so frequently, spares no Sex, Age, nor Constitution, and seizes the Patient, every other Day, with a kind of Rigor and Horror, which are succeeded by a quick Pulse, which is known from its Frequency, as, also, by an uneasy and burning Heat.

A *Tertian Fever*, when of the regular and legitimate Kind, is accompanied with these Symptoms: The Head is first seized with Pain; the Joints become languid; about the first Vertebrae of the Back, a Pain of the Loins is perceiv'd, which ascends along the Back, to the Epigastrium, and is accompanied with Costiveness, and a painful Sense of Tension in the Hypochondria. To these Symptoms are added a Refrigeration of the external Parts, especially of the Nostils and Ears; a Pandiculation, Oscitation, and Horror, which often produces a Trembling of the Limbs, a small, contracted, weak Pulse, and sometimes an insatiable Thirst. These Symptoms are succeeded by a Nausea, attended with a fruitless Desire of vomiting, or a real Vomiting of bilious, peccatus, and sometimes greenish Matter, frequently accompanied with a troublesome Cough, with a Discharge of Phlegm, arising from acid and viscid Crudities of the Stomach; then an uneasy burning and dry Heat seizes the whole Body, and the Face, before collapsed and pale, the Skin contracted and rigid, and the Vessels in the Hands and Feet emptied, rise, and begin to become red and tumid: The Pulse, is also, larger, fuller, and quicker; the Restlessness of the Patient is increased; his Respiration becomes more difficult; and his Eyes being hardly clos'd, he speaks many improper and incoherent Things. Afterwards these Symptoms gradually decrease; the Heat is allayed; the Skin is relaxed and moistened; high-coloured Urine is discharged, resembling the Liquor obtained in the Distillation of Spirit of Nitre, or *Aqua-tortis*, though without a Sediment. The Pulse, in the mean time, becomes softer; and a Sweat breaking out, the Paroxysm is removed, though at the same time its Duration varies according to the Difference of Constitutions, and morbid Causes; so that in some Patients it is protracted to ten or eleven, and in some to twenty Hours. On the subsequent Day of Intermission, the Body is languid, somewhat cold, and easily seized with an Horror; and the Pulse, though quick and vehement under the Paroxysm, is now slow, weak, and undulating; the Urine is, also, thicker, and deposits a Sediment, or at least contains a Cloud, which discovers a Disposition to a Sediment.

Thus the Course of the febrile Paroxysm, from the very Nature of the Symptoms, may justly be class'd among those spasmodic and convulsive Motions, which affect almost the whole nervous Parts of the Body. Hence it happens, that all those Things, which irritate the nervous Parts to anomalous Motions, such as the Passions of the Mind, strong Cathartics, acrid, caustic, and poisonous Substances, received into the Body with Aliments, or the Air, Substances of a Nature astringent, cold, and unfriendly to the Nerves, and acrid Clysters, with drastic Purgatives for their Ingredients, greatly contribute not only to the Generation, but also to a Relapse, or at least an Exacerbation, of *Tertian Fevers*.

The Antients imagined the Cause of these febrile Commotions in *Tertian Fevers*, to be an intemperate Bile, separated from the other Humours, extravasated and lodged in the lower Belly. But the Cause which excites and sustains these Commotions, is rather an excrementitious Matter, of a saline, sulphureous and active Nature, which, in my Opinion, is principally lodged in the *Primæ Viæ*, partly in the biliary Ducts of the Liver, and partly in the Duodenum; for in this Cavity the bilious and salival Humours, especially the pancreatic Juice, being vitiated by their mutual Fermentation with the Crudities arising from bad Digestion, by their Continuance and Stagnation generate a virulent Matter of this Kind, which, being successively convey'd hence, through the lacteal Vessels, to the Blood, and with it in a sufficient Quantity to the nervous Coats of the Head, spinal Marrow, Stomach, Intestines, and other secretory and excretory Ducts, excites such an universal Spasm; during which the Blood is first forced to the interior and larger Vessels, and afterwards, when the systaltic Motion of the Heart and Arteries is increased, the Circulation of the whole Mass of Blood and Humours is accelerated, the Obstructions in the minute Vessels of the nervous Parts are remov'd; and when the Spasm remits, and the excretory Ducts are relaxed, the febrile Matter is eliminated either by Sweat or Perspiration, after which the Paroxysm ceases, till a sufficient Quantity, of the like excrementitious Matter, being again convey'd from the *Primæ Viæ* to the Blood, and nervous Coats, excites and brings on a fresh Paroxysm.

The Generation of this Matter, and consequently of a *Tertian Fever*, is very easy, in Persons of delicate and choleric Constitutions, and in those disposed to Spasms or Commotions of Mind; it is, also, more quickly generated in Persons in the Flower of their Age, than in Infants, and Persons far advanced in Years: It is, moreover, speedily generated in hot Summers, when Southerly or Easterly Winds blow, especially, when cold Liquors are largely drank, or the Body long exposed to a nocturnal Cold, or moist Air, or an Atmosphere impregnated with minute Insects,

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about Lakes and Ponds; but much more, when the Stomach is full of Crudities, or when heavy or astringent Aliments are taken, especially with a Nausea.

'Tis, also, certain from Experience, that in the Spring, after copious Venesection, Persons of spongy Habits easily fall into spurious Tertian, or Catarrhus Fevers, especially when, at the very Time Fevers are already raging, they are exposed to a moist and rainy Air, and the Stomach is loaded with Aliments of hard Digestion. I have, also, known a Tertian Fever, sometimes of the continual, and sometimes of the double and anomalous Kind, produced by the Repulsion of the Purples by external Cold, by the Itch preposterously and unseasonably cur'd by means of mercurial and sulphureous Liniments; by an unskilful Drinking of medicinal and mineral Waters, neglecting at the same time a proper Regimen; as, also, by the hot *Caroline* Waters, which are of an astringent Quality, especially in Habits which are plethoric, impure, and full of Crudities.

Tertian Fevers, arising from these Causes, do not always proceed in the same manner, but widely differ: For which Reason Physicians have distinguished them into various Species. Thus a Tertian Fever is either of the legitimate or spurious Kind: the former principally attacks Persons of a bilious Habit, and those of delicate Constitutions, especially in the Heat of the Summer; and is accompanied with violent Symptoms, such as an Horror, Heat, Head-ach, Thirst, Vomiting and Uneasiness, and an intensely high-coloured Urine, but it is soon terminated and removed. *Hippocrates* indeed asserts, that this violent Disorder, lasts for twelve Hours, and is remov'd by the seventh Paroxysm; but these exact periodical Fevers are not found in our Northerly moist and cold Climates. Hence *Hieronymus Mercurialis*, in *Prælect. Bonon.* uses these Words: "The Tertian Fever of *Hippocrates* very rarely occurs; and I have hardly seen it, tho' "I have practised Medicine for forty Years." This I can also affirm from my own Experience. But in a spurious Tertian Fever, the Symptoms are indeed milder, the Heat not so burning, the Vomiting not so frequent, the Urine not of so high a Colour, and on the Day of Intermision, a Languor of the Strength, a Weariness of the Joints, and a Want of Appetite, remain with the Patient. This Species of Tertian is most incident to Persons of languid Habits, Women, and those of spongy Constitutions, especially in the Autumn.

A Tertian Fever may be, also, either regular or irregular, or anomalous, or confused. The former preserves an equal Type, both with respect to the Time of its Invasion and Termination, the Length and Shortness of the Paroxysm, and is accompanied with the usual Symptoms; whereas, in the latter, the Time of the Accession is irregular, sometimes in the Fore, and sometimes in the Afternoon, sometimes in the Evening and sometimes in the Middle of the Night; the Paroxysm is sometimes shorter and sometimes longer; the Urine, at the time of Remission or Intermision, deposits no Sediment; the Sweat is either too small, or too profuse, and afflicts the Patient on the Day of Intermision. It is, also, accompanied with different Symptoms, according to the Diversity of Constitutions; such as Fluxes, Hæmorrhages of the Nose, violent Subversions of the Stomach, intolerable Head-achs, Alienations of Mind, excessive Cardialgias, Pains of the Joints, and Gripes of the Intestines. And these irregular Fevers, which preserve no Type, are generally epidemical, arise from a præter-natural and unusual Constitution of the Summer and Autumn; and are generally of the continual Kind. In the Year 1727, Fevers, of this Kind, were epidemical almost all over *Germany*, after an intense Dryness, and Heat of the Atmosphere for several Months.

Tertian Fevers are also sometimes simple and sometimes double. In the former, the Paroxysms recur every other Day; but in the latter daily, and sometimes twice a Day, with one Day of Intermision. A double Tertian is however to be distinguish'd from a Quotidian, which daily keeps equal Times of Accession; but in the former, the Return of the Paroxysm corresponds to the alternate Days.

There is also a Tertian of the continual Kind, which may be known by these Signs, It attacks the Patient with Horror, Anxiety, Vomiting, Heat and excessive Languor: Nor on the following Day do these Symptoms totally intermit, but only remit; the Frequency of Pulse also remains, and is accompanied with Heat, Languor, and Weakness; but on the Day of the Paroxysm, after a previous but gentle Refrigeration of the external Parts, all the Symptoms are again increased and augmented. Such Fevers when epidemical, sometimes continue for two or three Weeks, before they terminate in a legitimate Intermittent. But it frequently happens, that a Tertian is for some Days of the continual Kind, and afterwards passes into an Intermittent, which is a good Sign; whereas 'tis a bad Sign, when from an Intermittent it changes to a Continual.

Generally simple and regular, as well as double and anomalous Tertians are epidemical, and arise from a præternatural Constitution of the Weather, especially in Summer. Epidemical Tertians are familiar, and, as it were, peculiar to certain Places; those, for Instance, which are situated low, cloudy, surrounded with Lakes, and Ponds, and infested with Gnats or Insects, so that the Inhabitants of such Places rarely escape a Tertian every Year, and

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Strangers are oftener afflicted with such a Misfortune, and with Difficulty totally freed from it.

All these Species of Tertians are at first mild, but are increased as the Paroxysms are repeated; a sure Proof, that under the Imperius of the Disorder, by the inordinate Motions of the Solids and the Fluids, the Juices of the Body are more and more contaminated, and rendered intemperate; and these Juices, on the Days of Intermision, when Perspiration and Excretion is diminished, gradually acquire a still worse Quality.

Every Paroxysm, is terminated by a Relaxation of the Compages of the Skin, by Moisture, or Sweat. The Urine on the Day of Intermision is thicker, contains a Cloud, or deposits a Sediment, which is the more copious, the more the Body abounds in Blood and Juices. But if in the Decline, the Sweat does not break forth, if the Urine is, also, thin and aqueous on the Day of Intermision, and the Patient intensely costive, as is very usual with hypochondriac Patients, these Signs are strong Proofs that the nervous System is greatly affected by Spasms, arising from an obstinate and rebellious febrile Matter.

Generally about the third or fourth Paroxysm, small Ulcers arise about the Lips, and the Urine is discharged with a kind of Heat, after which the Symptoms are remarkably mitigated. But this Species of Fever is best, most securely, and totally terminated, when either by Nature alone, or the Assistance of Art, a copious bilious Flux is procured, and Perspiration increased, on the Day of Intermision; which may be known from the Largeness and Vigour of the Pulse, and the Increase of the Strength. But those who labour under epidemical and anomalous Tertians; after the Termination of the Fever, recover Health and Strength in a slow and difficult manner, for which Reason they require an accurate and proper Regimen.

No Fever by its Heat and intense internal Motion under the Paroxysm, so quickly dries a succulent, or emaciates a corpulent Habit, and generates so large a Quantity of bilious Recrements, which are voided by Vomit, Urine and Stool, as a Tertian, accompanied with an intense and long protracted Heat. And this was certainly the Reason, why the Antients derived this Fever from an intemperate and redundant Bile, tho' this Redundance is rather the Effect, than the Cause of the Disorder.

Tertians are longer and more obstinate in Autumn and Winter, than at other Seasons, especially when the Viscera are in a bad Condition, the *Primæ Viæ* spasmodically constricted, and infested with Flatulencies, the Patient costive, or voracious; or when he has eaten too much, especially before the Paroxysm, as, also, when, in consequence of the Neglect of a proper Regimen, under, and after the Paroxysm, the Sweat is suppressed, or when the Cure is preposterously instituted, which generally happens in poor Persons, and those who labour for their Bread. This Doctrine is confirm'd by *Hippocrates*, in *Secl. 1. Aph. 9.* But Tertians are shorter, and less dubious when they happen in the Summer; when the *Primæ Viæ* and Viscera are disposed to a sound State, and a proper dietetic and diaphoretic Regimen, are skilfully used, during the Times of Intermision.

Tho' every Intermittent is not of a very dangerous Nature, yet hardly any Fever requires a stricter Regimen, and a more cautious Method of Cure, than those of the Tertian and Quartan Kind; since these, if proper Measures are not taken, bring on violent and incurable Diseases, such as slow and hectic Fevers, sudden Swellings of the Feet, Dropsies, Contractions and violent Pains of the Limbs, flatulent and hypochondriacal Disorders, and various spasmodic and convulsive Diseases; and in Children Epilepsies; all which Disorders succeed the preposterous and too liberal Use of Astringents, before a due Correction and Evacuation of the excrementitious Matter. Hence *Alexander Trallian*, in *Lib. 12. Cap. 6.* justly observes, "that a Tertian is easily cured, "but when it is treated by those Physicians who have not Judgment enough to take proper Measures, it is not only cured "with Difficulty, but also sometimes rendered incurable."

A Tertian in consequence of some Error, either of the Patient or Physician, may easily change into some other Disorder, a simple Tertian, for Instance, into one of the double, and sometimes of the triple Kind; or into a quotidian, and slow, or even into a continual or choleric Fever.

Tertian and Quartan Fevers return more frequently and easily than other Disorders, especially when they are preposterously suppressed. For when a Patient, lately recovered from such Fevers, is exposed to a moist and cold Air, or a penetrating North-Wind; when his Stomach is over-loaded with too great a Quantity of Food, or full of Aliments of an unsalutary Quality; when his Mind is discomposed by any Passion, especially Anger, or a Fright; or when any acrid Purgative is exhibited, forthwith the febrile Spasms, the Head-ach, the Refrigeration of the external Parts, such as the Ears and Nostrils, the Oscitation, Pandiculation, the Pain about the first Vertebra of the Loins, the Languor of the Limbs, the uneasy Stricture and Tension of the Hypochondria and Intestines, the Horriphation and Refrigeration together with the concomitant Heat return; tho' in the first Paroxysm of the returning Disorder, just as in the Beginning of all Intermittents, all these Symptoms are mild, but increased and augmented in the subsequent Paroxysms.



Since Tertian Fevers are generally epidemical, and their antecedent productive Cause principally consists in some Fault, or long Intemperature, of the Air, a Suppression of Perspiration, and a Load of Crudities in the *Primæ Viæ*, 'tis sufficiently obvious, that, when such Fevers rage, an intemperate, impure, and vapid Air is to be avoided; but, above all, a nocturnal and moist Air: Nor is the Patient to overload his Stomach with too large a Quantity of Aliments, or those of hard Digestion: Neither is he to drink large Quantities of Liquor, especially of the spirituous or acedent kind; nor to indulge himself in the Gratification of his Passions.

Among the Medicines proper for preventing Tertians in an excessively hot Summer, the most considerable are, gently nitrous, absorbent, and diaphoretic Powders; temperate and diluting Decoctions, prepar'd of the Roots of Succory and Vipers-grass, the Shavings of Hartshorn, and clean Barley, and us'd for ordinary Drink; as, also, the cold *Salteran* Waters, or those of *Wildungen*, which at the same time render the Body sufficiently soluble. It is, also, expedient every Morning after Sleep, to promote Perspiration by Infusions of such Herbs as purify the Blood, such as Scordium and Paul's Betony: For a Tertian Fever does not readily seize the Person, whose Body is sufficiently soluble, and whose Perspiration is free: On the contrary, when he is preternaturally costive, and his Body languid, and somewhat cold, 'tis a pretty infallible Sign, that a Tertian is not far off.

*Intentions of Cure in a Tertian.*

In the Cure of all Disorders, the principal Intention of the Physician is to be directed to the Removal of the proximate Causes. Since, therefore, Tertians principally arise from a thin, acrid, moveable, and bilious Humour, stimulating the whole nervous System, and Coats of the Vessels, to Spasms and Strictures, hence 'tis obvious, that the great Intentions to be pursued in their Cure are,

1. To temperate and correct that subtle and caustic Acrimony.
2. Gently to dissipate and evacuate, especially by Perspiration, the corrected and prepar'd peccant Matter, generated and left in the Body in consequence of an obstructed Perspiration.
3. To mitigate the violence of the Spasms, which especially under the Cold and Horror excite terrible Symptoms.
4. Seasonably to dislodge and evacuate the acid, viscid, and bilious Crudities, which are principally lodg'd in the Duodenum, and afford a *Nidus* for the febrile Matter.
5. After the Paroxysm to restore Strength to the Body, and preserve the Excretions in due Order, lest, as is usual, after every violent Shock of any Disorder, and Spasms of the muscular and nervous Parts, a want of due Tone in the Parts, and Languor of the Motions, should succeed, in consequence of which the Circulation of the Blood and Humours, together with the Secretions and Excretions, would become languid, and, by this means, the febrile Matter be afresh generated, cherish'd, and accumulated. And
6. When such a Fever is remov'd, since it easily recurs, carefully to hinder and prevent the Generation of fresh Matter fit for producing a Relapse.

In order, then, to answer the first Intention, which is to correct the bilious Acrimony, which, in consequence of the intense Heat, gradually contaminates all the Juices, nothing is more efficacious than common Nitre duly depurated, since by fixing the volatile Sulphur, by which the intestine Motion is excited, it extinguishes the Heat, and produces a far better Effect than Acids, which indeed allay the Heat, but at the same time inspissate the Humours; whereas Nitre rather preserves them fluid and thin. The sulphureous and bilious Acrimony is, also, excellently obtruded by drinking Liquors of a diluting and moistening Nature, such as Pisans prepared of Barley-roots, of Vipers-grass, Shavings of Hartshorn, Juice and Peel of Citron duly boil'd in pure Water; as, also, Water-gruel, sweet Whey, the *Salteran* Waters, or Small-beer well boil'd, and of a diuretic Quality: And these are principally beneficial under the Paroxysm.

The second Intention, which is, after the Paroxysm, gently to eliminate, especially by Perspiration, the thin excrementitious bilious Humours now prepared and corrected, is principally answer'd by gentle Diaphoretics, such as Cerufs of Antimony, burnt and Philosophically prepar'd Hartshorn, Infusions prepar'd of Scordium, or Carduus Benedictus, and Citron-peel; as, also, the Essence of Scordium, or Carduus Benedictus, sufficiently saturated, tho' not very spirituous, and mix'd with the anodyne mineral Liquor.

The third Intention of Cure is, to mitigate the Violence of the Spasms, under the Paroxysm. This Purpose is excellently answer'd by the Use of nitrous, refrigerating, gently diaphoretic, and diluting Substances, together with such things as excite a moderate breathing Sweat: But, among all other Medicines, this Intention is best answer'd by the anodyne mineral Liquor, or, which may be used as a Succedaneum for it, by the dulcify'd Spirit of Nitre well prepar'd; since by its mild anodyne Sulphur,

which is friendly to Nature, it checks the exorbitant Commotions, not only of the nervous Fluid, but, also, of the solid, nervous, and muscular Parts, especially when it is mix'd with fix'd Powders, or diaphoretic Essences, and exhibited with Waters of a sedative Virtue, such as those obtain'd from the Flowers of Elder, the Lime-tree, Primroses, Lilies of the Valley, common Chamomile, Roses, the *Egyptian* Thorn, Meadow-sweet, and that obtain'd from black Cherries.

In order to answer the fourth Intention, which is to dislodge and evacuate the acid, viscid, and bilious Sordes lodg'd in the *Primæ Viæ*, the Physician is carefully to endeavour to correct and eliminate the peccant and intemperate Juices, convey'd thither from the whole Body. Hence, in Cases where there is a Redundance of acid Crudities, the Cure is perform'd by Absorbents alone, whether alkaline or saline earthy Substances. The safest and most efficacious of these are the Eyes and Claws of Crabs, and the Shells of Eggs, which, as they are tender, and easily dissolv'd, are for that Reason justly preferable to Shells, which are hard, cannot be easily dissolv'd, and which with an Acid acquire an astringent Quality.

We have already mention'd, that nothing is superior to Nitre, in Cases where there is a bilious Acrimony; but where the Juices are thick, viscid, and tenacious, no Medicines are more efficacious than neutral Salts, such as vitriolated Tartar, the digestive Salt of *Sylvius*, prepar'd of the Caput Mortuum of Spirit of Sal Ammoniac, made of equal Parts of Salt of Tartar, and Sal Ammoniac, as, also, depurated Sal Ammoniac itself: These Medicines are certainly highly beneficial and efficacious in robust Persons, accusom'd to a coarse heavy, Food and Aliments obtain'd from the Sea, such as the *Swedes*, the *Dutch*, and the *Westphalians*, with whom these Fevers generally last very long. But these Salts must be diluted in a sufficient Quantity of some aqueous Vehicle; for these Medicines, when duly repeated, or exhibited in a large Dose, besides their inciding Quality, also, prove purgative, and effectually eliminate the Sordes. For this Reason, in our Days, the Salts prepar'd of medicinal Waters have acquir'd a just Reputation for their Salubrity, such as the Salts obtain'd from the Waters of *Sedlitz* and *Egra*; and, in Imitation of them, *Epsom* Salts; half an Ounce or more of which, dissolv'd in a Pint of Water, by deterring and evacuating the viscid and excrementitious Sordes of the *Primæ Viæ*, is of excellent Service against Intermittents, and the Disorders arising from the Stomach. The same Effect is produc'd by the bitter *Sedlitz* Waters, which I discover'd; for I have known Tertians cured only by drinking half a Pint of them three or four times on the Days of Intermision. But sometimes the Weakness of the Stomach, and the Frequency of Spasms in it, together with acid, saline Juices, which are usual in Infants, old Persons, hypochondriac Patients, and those labouring under Cardialgias, contra-indicate the Use of Salts: For which Reason in such Cases, it is rather expedient to exhibit an Ounce or two of Manna, with or without Rhubarb, with the Addition of a Dram, or half a Dram, of the *Terra foliata Tartari*, and a few Drops of the Oil of Cedar.

When the *Duodenum* is full of a bilious Humour, or the biliary Ducts infarcted with tough and contaminated Juices, it is expedient to make an Evacuation, by means of Emetics. For this Purpose we may, to weak Patients, exhibit Ipecacuanha-root, but, to more robust Persons, this Root mixed with a Grain or two of Emetic Tartar, Emetic Tartar by itself, also, or, which is still better, the emetic Julap prepar'd of spirituous Citron-peel-water, Julap of Roses, and dissolv'd Emetic Tartar; but if 'tis necessary, not only to purge the superior, but, also, the inferior Viscera from recementitious Sordes, in Persons who indulge themselves in Gluttony, both those Ends may be commodiously obtain'd by an Infusion of Manna, prepar'd of an Ounce or an Ounce and an half of Manna, a Dram of the *Terra foliata Tartari*, and one or two Grains of emetic Tartar.

The peccant Humours being thus corrected, and evacuated thro' the several Emunctories of the Body, the Physician is next to pursue the fifth Intention of Cure, which consists in restoring the Strength of all the solid Parts, especially of the Stomach and Intestines, which are weaken'd by the long-continued Spasms and Paroxysms. This is a Circumstance of such Importance in the Cure of Intermittents, that tho' alterative, aperient, bitter, and evacuating Medicines are ever so long us'd; yet the Paroxysms are not remov'd, whereas it remits, and at last ceases, by the due Use of proper Corroboratives; for when the Strength of the nervous vascular and muscular Parts is restor'd, they are not subject to Stagnations of the Humours, which are the Causes of the spasmodic Paroxysms; but the Circulation of the Blood, and all the Juices, rather becomes more free, the Pulse quicker, and the Respiration, together with the Secretions and Excretions, stronger; so that the Paroxysms not only cease, but, also, the fresh Fomes of the febrile Spasms is dispel'd, which otherwise gains Strength, when, on the Day of Intermision, the Patient's Respiration is languid, and his Pulse small.

But, among all the antifebrile Specifics of an astringent Quality hitherto known, such as the astringent Barks and Roots, Per-



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Perspiration of Steel or Alum, or even the somewhat hotter Medicines, none is more temperate, safe, or better accommodated to Persons of all Ages, Temperaments, and Sexes, or answers more Intentions of Cure, than the Peruvian Bark, as is evinc'd by numberless Experiments; for when this Medicine is us'd at a proper Season, and in Conjunction with a due Regimen, so as not to suppress, but rather to promote, the natural Excretions, it, on account of its mild earthy astringent Principle, and balsamic Bitterness, surpasses all other Medicines; and, when a few Doses of it are only exhibited, miraculously allays febrile Paroxysms: But 'tis far more efficacious in Powder and Substance, than in Decoctions, Infusions, Essences, or Extracts; and, if all other Circumstances are alike, if it is exhibited in the time of Intermission, the Pulse becomes more brisk, the Heat and Perspiration greater, and the Body, especially in choleric Patients, more soluble; all which are certain Proofs of its happy and successful Operation. I often prescribe an Electuary, by which I have seen a great Number of Patients labouring under Tertian Fevers cur'd, and which is prepar'd in the following manner.

Take of Elder-rob, half an Ounce; of *Peruvian Bark*, six Drams; of the Powder of common Chamomile-flowers, two Drams; of the Extract of the lesser Centaury, and Powder of Cloves, each half a Dram; and of the Syrup of Citron-juice, an Ounce and an half: Make into an Electuary.

I sometimes, also, in order to facilitate Perspiration, mix with it half a Dram of diaphoretic Antimony, old Theriaca, or Sal Ammoniac; and, after the Paroxysm is over, every two Hours I exhibit half a Dram of this Electuary. But for those who have tender Constitutions, and weak Stomachs, the Bark is to be reduc'd to a liquid Form in the following manner.

Take of *Peruvian Bark*, an Ounce; of Cascarilla, Cinnamon, and Salt of Tartar, each one Dram; of the Water of Chamomile-flowers, one Pint and of Wine, the like Quantity: Digest in a gentle Heat; and to the Liqueur, when strain'd, add half an Ounce of the Syrup of Orange-peel: Mix for an antifebrile Potion, an Ounce or two of which are to be taken every two Hours.

In order to prevent, which is the Design of the sixth Intention, the frequent Relapses of Intermittent, and especially of Tertian Fevers, there is no more effectual Method, than to avoid all such Things, as have a Tendency to generate such Fevers, carefully observing the Cautions before inculcated in the Method of Prevention: And since, when the Body is exhausted by the Fever, the Appetite, on its Departure, is generally very keen, whilst the Stomach and Nature are as yet but weak and languid, it frequently happens, that new Crudities are regenerated in the *Primæ Viæ*, which lay a Foundation either for a slow Fever, or a Relapse into the former, which was before remov'd. Hence 'tis absolutely expedient, that those who are just recover'd from a Fever, should eat light Suppers, and Aliments of easy Digestion, and use proper Measures to support the Strength of their Stomachs, eliminate the Sordes from the *Primæ Viæ*, and deterge the Remains of the Disorder, if there are any. For this Purpose I recommend the moderate, tho' frequent, Use of the *Balsamic Cordial Pills*, nine or eleven of which may be swallowed every other Day, either at Morning or Night; for by their means the whole Body acquires Strength, the Flatulences are easily discuss'd, the Body render'd gently soluble, the Pulse increas'd, and the Perspiration render'd brisker. In this Case, excellent Effects are, also, produc'd by Stomachic corroborative Elixirs, of which thirty or forty Drops are to be taken before Dinner. This Intention is, also, excellently answer'd by the Balsamic Elixir, the Stomachic Elixir of *Michaeli* to be found in the *Thesaurus Pharmacologicus* subjoin'd to the *Clavis Schræderiana*, or the Stomachic Essence prepar'd in my manner; or the Essence of red Gentian, mix'd with Sal Volatile Oleolum, as, also, my visceral Elixir.

### *The Methods of Cure in particular Cases.*

When a Load of peccant Humours in the Stomach and Duodenum calls for an effectual Depletion, which may be conjectur'd from a previous Course of Gluttony, an Anxiety of the Præcordia, Nausea, Eructations, and Bitterness of the Mouth, we are, immediately after the first or second Paroxysm, to exhibit, on the Day of Intermission, such an Emetic as we have above recommended; or, if the Stomach is strong, and peccant Matter to be evacuated by Vomit and Stool, the following Formula may be prescribed.

Take of *Sedlitz* or *Epsom* Salts, half an Ounce; and of emetic Tartar, two or three Grains: Reduce to a Powder, to be dissolv'd in half a Pint of pure tepid Water, to be drank two Hours after the Paroxysm is ended; afterwards

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facilitating the Evacuation by large Draughts of thin Water-gruel, with a large Quantity of Butter in it.

But as soon as the Strength is, in some measure recover'd, after the Evacuation, some Doses of the above describ'd anti-febrile Electuary are forthwith to be exhibited; by which means it has often happen'd, that the Fever has been remov'd in its very Beginning, and by the Use of a proper and moderate Regimen never return'd.

On the contrary, if any thing hinders the salutary Excretions, and many serous and crude Juices remain within, which require a sufficient Evacuation, the Cure is to be begun by purging with deterfive Salts: For which Purpose,

Take of *Sedlitz* Salts, half an Ounce; of Sal Ammoniac, or the digestive Salt of *Sylwius*, and of Crabs-eyes, each two Drams; and of purified Nitre, one Dram: Make into a Powder, of which half a Dram is to be taken every two Hours, in an Ounce of pure Water, or common Chamomile-water or Ptisan, drinking, immediately after, a Cup of Tea.

With this, after I have, for some of the intermittent Days, mildly and gradually purged the whole Intestines, and the Fever yet remains, or is not diminish'd with respect to its Vehemence, I either order equal Quantities of the *Peruvian Bark* and Salts, or my Electuary alone, to be interpos'd; and by this Method I have soon and happily cur'd epidemical and autumnal Tertians.

But if the Patient is subject to the hypochondriac Disorder, is of a delicate Constitution, is costive, or afflicted with Inflammations of the Stomach, is impatient, and readily dispos'd to Commotions of Mind, we are neither to use Emetics, nor purgative Salts; but the most happy Effects are produc'd by Clysters prepar'd of temperate, carminative, and emollient Substances, as, also, the balsamic Pills exhibited in a small Dose, nine, for Instance, or eleven, at the time of Intermission, giving some Hours, either before or after, a digestive Powder, prepar'd of Crabs-eyes, the *Terra foliata Tartari*, vitriolated Tartar, and depurated Nitre.

In the Accession of the Fever, and under the Paroxysm, especially during the Rigor, nothing is to be attempted by the Physician: The Patient is at that time, also, to abstain from drinking, especially cold Liquors, even tho', under the cold Fit, he should be rack'd with Drought. But as the Heat gradually increases, and arrives at its Height, a sufficient Quantity of Drink is to be allow'd, tho' not in large Draughts, but small Quantities frequently exhibited, taking care, at the same time, that it be not ungrateful to the Palate. For this Purpose, we may use the Decoctions and Infusions already recommended, and especially Pisans, or Water-gruel, with Vipers-grass, adding the Syrup of Lemons, or Raspberries, as, also, the dulcify'd Spirit of Nitre, and Oil of Cedar. In order to extinguish the Heat, nothing is more proper than a temperating Powder, consisting of two Parts of Crabs-eyes, and one Part of Nitre, frequently exhibited with Ptisan.

When the Heat remits, and the Paroxysm is terminated, the appearing Moisture or Sweat on the Skin is to be gently promoted, not only by the Heat of the Bed and Stoves, but, also, by internal Medicines: For which Purpose, besides the Things already mentioned, Infusions of the Roots of Vipers-grass, Scordium, and Citron-peel, are excellent. But, after the Fever is totally remov'd, the Body is to be carefully defended against all Refrigeration internal or external, whilst we are rather to keep it in a perpetual Perspiration; which may be obtain'd by proper Exercise, and the frequent Drinking of warm Liquors.

### *Practical Cautions and Observations.*

In order to the skilful Cure of Tertians, whether simple, double, or continued, the Beginning and End of the Paroxysm are, above all things, to be observ'd by the Physician, who may judge of it from the Refrigeration of the Extremities, the Pandiculation, the Oscitation, the Horror, and a Change of the Pulse into one of a more quick and contracted Kind. But he is to judge of the Termination of the Paroxysm from the increas'd Softness of the Pulse, the Remission of the Heat, and the Moisture or Sweat on the Body; for, either before or during the Paroxysm, 'tis not expedient either to let Blood, or exhibit a Vomit, a Purgative, *Peruvian Bark*, or any other corroborating and astringent Medicine. But, when the Paroxysm is over, the Sweat, when 'tis expedient, is to be commodiously promoted; and in the Time of the total Intermission, it is proper to exhibit Diaphoretics, Evacuants, or Specifics, accommodated to the peculiar Circumstances of the Patient.

As a Tertian in the Beginning, especially in hot Constitutions, often resembles a continual and burning Fever, we are only at that time to use temperating, diluting, gently saline, digestive and nitrous Preparations, abstaining from Emetica, and acrid, hot Sudorifics, till it has assum'd the Type of a Tertian.



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If a Tertian is obstinate, as in the Autumn, or passes into a Quoridian, the antifebrile Potion, described by *Crollius*, from him recommended by *Riverius*, and consisting of the distilled Water of *Carduus Benedictus*, Salt of Wormwood, and Spirit of Vitriol, drank twice or thrice a Day, afford great Relief, especially when the balsamic Pills are interposed. But 'tis to be observed, that the Spirit of Vitriol is not to be immediately mixed with the Salt of Wormwood, but the Mixture is to be made in the Water. I, also, generally substitute *Oil of Tartar per Deliquium* in the room of the Salt of Wormwood, observing, in the Mixture, exactly to hit upon the Point of Saturation. And such a Potion is possessed of a similar, or even a superior, aperient Virtue, to the medicinal and mineral Waters above-mentioned.

The same Potion is highly beneficial in a too bilious Tertian, or one produced, in choleric Patients, by Anger. We are, in such Cases, carefully to abstain from bitter, sudorific, alexipharmic, acrid, aromatic Medicines, and much more from volatile Salts; but we are rather to use highly temperate, saline, nitrous, and precipitating Medicines.

*Peruvian* Bark is certainly an excellent Antifebrile, and I have found it both safe and efficacious in epidemical Fevers. But it is always more safe in Patients of delicate hot and brisk Constitutions, as, also, when the Urine deposits a Sediment, and the Perspiration is freely carried on, than in languid, melancholic, and phlegmatic Patients, Women who labour under a Suppression of the Menfes, and those in whom the Excretions are defective, or the Urine crude. Hence, after the Exhibition of the Bark, Motion of the Body is carefully to be enjoined; and not cold, but hot, Liquors prescribed for Drink.

'Tis sometimes necessary, by means of the *Peruvian* Bark, and other Specifics, to check the Paroxysms, before the morbid Matter is corrected, and sufficiently evacuated, that the Physician may afterwards more successfully correct and eliminate the Fomes of the Fever by proper Remedies.

When the Heat, and other Symptoms are so violent as to exhaust the Strength, I have found from many Instances, that happy Effects are produced by *Peruvian* Bark mixed with Nitre, and exhibited in the Form of an Electuary; by the Use of which, I have seen the Symptoms immediately mitigated, and the Patient's Strength increased: Only 'tis to be observed, that, even after this, the febrile Matter is to be corrected and evacuated by proper Medicines.

As acrid Purgatives increase the Spasms, they are never to be exhibited in a Tertian, much less when by the *Peruvian* Bark, or other Medicines, the Paroxysms are removed, because they easily produce a Relapse. But if the Patient is costive, his Body is to be rendered soluble by Clysters, or the balsamic Pills, interpoling the Use of the Salts.

Emetics, when indicated, are, in the very Beginning, to be used without Delay; nor are we to wait, till the Matter is concocted; but rather eliminate it by the nearest Way, before it diffuses its hurtful Influences farther. But, if the Patient has already laboured under a Tertian for some time, the preternatural Heat disposes the Stomach to an Inflammation, which is afterwards easily brought on by an Emetic. However, when the Paroxysm returns frequently, tho' mildly, and when the Fever, thro' a Neglect of a proper Regimen, or a bad Method of Cure, continues for some Months, a Vomit is often exhibited with Success: Only 'tis to be observed, that at this time a smaller Dose is to be exhibited, than at the Beginning; and that, by means of such an Emetic, so large a Quantity of bilious Humours is evacuated from the *Duodenum*, that tho' the Fever does not totally cease, yet 'tis afterwards easily cured by antifebrile Specifics, especially the *Peruvian* Bark, with the Addition of a due and proper Regimen.

In Tertian Fevers, Venesection is not to be used without the greatest Caution. In the Beginning of the Fever, when it resembles one of the continual Kind, when the Heat is intense, and accompanied with a Delirium, when the Disorder happens in the Summer, when the Patient is in the Flower of his Age, of a bilious Constitution, easily provok'd to Anger, and addicted to luxurious and high Living, opening a Vein is of great Service; only the *Præcordia* are to be previously cleansed, and the Time of Intermission chosen for that Purpose. A few Hours before or after the Venesection, the Patient may drink a few Cups of an Infusion of common Chamomile-flowers, which is of singular Efficacy against Fevers; partly because the Blood, being by it attenuated, circulates more freely; and, partly, because the spasmodic Motions, which constitute the very Nature of these Fevers, are, by its means, in some measure allay'd: On the contrary, when the *Præcordia* are full of Crudities and Sorde, the Patient not plethoric, and other Symptoms not present, Venesection is injurious, because the salutary Excretions, especially Perspiration, are, by its means, suppressed; and the Fever, as we find from Experience, increased and protracted.

In intermittent Fevers, we are absolutely to abstain from Opiates and Anodynes, among which are, the *Pilula de Cynglossa*; for tho' they mitigate, and sometimes suspend, the Paroxysm, they yet impair the Strength, and disturb the whole Progress and salutary Crisis of the Fever; so that the Cause of the Disorder becomes stronger, and the Paroxysms far more violent. But the

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*Pilula Wildegansii*, or the *Theriaca Castalis*, are far more proper and expedient in this Disorder.

Preparations of Alum and Vitriol, also, stop the Paroxysms of Fevers. But, if these vulgar Medicines are exhibited, 'tis necessary, after they are used, to promote Sweat by Exercise, or by warm Decoctions and Infusions, that their noxious Qualities may be, in some measure, prevented; for, after the preposterous Use of these and other more powerful Astringents, I have observed many Misfortunes, especially a total Suppression of salutary Discharges of Blood, in those accustomed to them.

Cascarilla-Bark is, also, an excellent Medicine in Intermittent Fevers, on account of its balsamic, sulphureous, anodyne, earthy, and astringent Principle. But, because it generally throws the Blood into preternatural Commotions, and excites a violent Heat, it is not much used in bilious Patients, and those subject to impetuous Motions of their Fluids; and, if it is prescribed for such, a very small Dose of it must only be used. But for languid and phlegmatic Patients, as, also, for Women, it is more prescribed; upon which Occasions, it is most commodiously mixed with *Peruvian* Bark.

Tho' Absorbents are of singular Efficacy in the Cure of Fevers, yet they ought to be used moderately, and chosen judiciously; for when large Quantities of them are exhibited, they are not subdued by the Solvent or Menstruum of the Stomach; but, remaining entire, overload it, or which is worse, by uniting into a kind of Paste, create Anxieties, and a Nausea. The coarse Absorbents, principally obtained from Sea-substances, are not only with Difficulty dissolved, but, also, afterwards, acquire an astringent Quality.

It frequently happens, that in the Paroxysm, especially its Beginning, in consequence of a Congestion of Blood to the Head, particularly in plethoric Patients, there arises a violent Head-ach, accompanied with a Perturbation of the Senses and Imagination. But this Head-ach is not to be promiscuously removed by Topics; for, I have observed, that the common Family Epithems, prepared with Wormwood, Rue, Cumin, Juniper-berries, common Salt and bruised Bread, do more Harm than Good, in consequence of the Vapour with which they fill the Head. Much less are we to use cephalic and nervous Substances, such as, my *Balsam of Life*; which are, on other Occasions, highly beneficial in Head-achs.

In the Paroxysm, hot Liquors, such as Tea and Coffee, are highly improper, because they too much exagitate the acrid and bilious Humours of the Blood, and surprisingly increase both the Heat and Anxieties; for *Hippocrates*, in *Lib. 3. de Morb.* informs us, "that hot Liquors are not expedient in Tertians, but rather such as are cold." But out of the Paroxysm, these warm Portions are of singular Service, especially when the Body is sufficiently soluble.

When a Tertian Fever is removed by means of Specifics, the proper Methods of preserving Health, are not to be neglected; but Refrigeration of the Body is to be carefully avoided, Moderation in Eating and Drinking observed, and the Use not only of the balsamic Pills, but, also, of the Stomachic Elixirs, for some time persisted in.

But if, in consequence of drinking large Draughts of cold Liquor, or the preposterous Use of Astringents in Tertians, oedematous Tumors succeed, we are, by no means to use acrid Purgatives, Chalybeates, or volatile Salts, but the Cure is rather to be attempted by absterive Salts, balsamic Pills, and temperate Decoctions of the Woods. When the Patient labours under an *Anasarca*, great Relief is, also, afforded by an Emetic, mixed with a due Quantity of the Extractum *Parchymagogum Crollii*, since by this means a large Quantity of Water is evacuated.

I have often observed, that plethoric old Persons, and those accustomed to Venesection, by Refrigeration, have fallen into a violent Colic, succeeded by a continual epidemic Tertian, and in these, Venesection proves highly beneficial; but the *Peruvian* Bark, too soon exhibited, generally proves so prejudicial, as to induce a Quoridian, resembling an Hætic.

To Children of eight or ten Years of Age, labouring under Tertians, I have with Success exhibited an emetic Potion, and afterwards, ordered Clysters of antifebrile Ingredients, such as the lesser Centaury, and *Peruvian* Bark to be injected, by which means the Fever ceases totally, and never returns.

Women become Cachectic from a Suppression of the Menfes, when seized with a tertian Fever, are to be treated very cautiously, rejecting all drastic Medicines, Evacuants, Corroboratives, and even Emmenagogues; which, however, if temperate, may be successfully used, when the Fever is wearing off. But great Relief is afforded by Clysters of gently laxative, bitter, and carminative Ingredients; as, also, by gently laxative Infusions, which contain bitter Ingredients, *Peruvian* Bark, and Filings of Steel.

Childbed Women, labouring under intermittent Fevers suffer very much, and are afflicted with hysteric Symptoms, unless their *Lochia* are duly attended to, especially when this Evacuation, together with the Fever, is too soon suppressed, by Absorbents obtained from Sea-substances, or precipitating Substances of a gross Texture, such as Shells and Coral, with or without an Acid. In this Case, great Relief is afforded by the *Pilula Balsamica*



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*fabrica tonica*, which are highly beneficial in Diseases arising from any Fault of the Uterus. *Frederic Hoffman.*

TERTIANARIA. A Name for the *Scutellaria*. See CASSIDA.

TERTIAS.

The Latin Phrase *ad tertias*, though frequently used in Medicine, is capable of a double Interpretation, for it may either signify two Thirds, or one Third; that is, when applied to Decoctions: For Example, it may either signify, that the Boiling should be continued till only one Third of the original Liquor remains behind; or till only one Third of the Whole is wasted, and two Thirds are left: But the latter seems to be the more common and approved Acceptation; and so, likewise, *ad tertias implere*, or *ad duas tertias*, is not to fill one Third, but two Thirds of a Vessel. *Edinburgh Dispensatory.*

TERTIUM SAL. A neutral Salt.

TESSELLÆ. The same as ROTULÆ, or TABELLÆ, Lozenges, or Troches.

TESSERÆ OS. The Os *Cuboides*.

TESTA. The Shell of a Fish, or Snail; or an earthen Vessel.

TESTES. The Testicles.

TESTICULI. The Testicles. See GENERATIO.

## THE METHOD OF TREATING A CANCER, OR SPHACELUS, IN THE TESTICLES.

If a Scirrhus of the Testicle should degenerate into a Cancer, or an Inflammation into a Sphacelus, or if from any other Cause the whole Testicle should be affected with Putrefaction, one, and that a miserable Remedy only remains, by extirpating the Testicle, in order to prevent the Disorder from extending itself to the Groin, and the interior Part of the Abdomen, and at last, killing the Patient. The Method of performing this Operation is explained under the Article CASTRATIO.

But when the Testicle is only in part corrupted by an Abscess, there is no Necessity of extirpating it entirely, but only of opening the Abscess, and afterwards cleansing and healing the Ulcer. *Garengot* observes, that it is extremely necessary in every Castration, that an Incision should be made at the Ring of the Abdomen, and that the spermatic Vessels should be divided from the Parts to which they adhere, and a Ligature be made about them, at the Ring, or even above it, before the Testicle be touched; which Method, he says, will not only be milder to the Patient, but even promote the Cure: But for what Reason, he does not say. On the contrary, it is rather to be feared, that such an Incision would weaken this Part of the Abdomen, and make it liable to be affected with a Rupture; not to mention the Pain, which the Patient must undergo, in suffering this Incision, which appears, at least to me, unnecessary; besides the Danger of an Inflammation being produced by the Ligature, which might proceed to the internal Parts. But if the Corruption lies in the spermatic Vessels to the Ring, or above it, Castration ought rather not to be attempted.

## OF AN INFLAMMATION OF THE TESTICLES.

Sometimes one, or both the Testicles are attacked with an Inflammation, which is attended with excruciating Pains, especially if the Disorder comes to any considerable Height.

This Disorder may proceed from two Causes: 1. From external Violence, as a Fall, Bruise, or Contusion, which may readily happen from mounting an Horse hastily, or carelessly. 2. From a Venereal Cause, by the too early or imprudent Checking of a Gonorrhœa.

An Inflammation of the Testicles may be distinguished from any other Disorder, particularly a Rupture of the Scrotum, when the Patient, after any of the above-mentioned Causes, complains of a Swelling, Heat, Redness, and Pain in the Testicles, and when the Tumor and Inflammation are apparent on Inspection. Besides, upon feeling the affected Testicle, it will be found preternaturally enlarged, and sometimes equal to the Size of a Fist.

This Disorder is far from being trivial; for frequently an Abscess or Sphacelus is induced, and the Patient is either deprived of his Virility, or his Life; or it degenerates into a Scirrhus, or a Cancer, the consequence of which, also, is generally Death; or lastly, it is succeeded by a Sarcocœle, or Hydrocœle, not without extreme Uneasiness to the Patient.

The same Medicines are required for resolving an Inflammation of the Testicles, which are used for the same Intention in Inflammations of the Breasts (see MAMMA); particularly Vinegar of Licharge, and Lime-water, mixed with camphorated Spirit of Wine, Cerufs, Tutty, and Lapis Calaminaris: But in the Night-time, when Fomentations are inconvenient, apply the Plaster of Frogs, with a double Quantity of Mercury, or the Diachylon-plaster. Nor are internal digereat Medicines to be neglected: If the Tumor proceeds from external Violence, or an Inspissation of the Blood, the Powders of prepared Crabs-eyes, Oyster-shells, Mother of Pearl, Cinnabar, and *Arcanum Duplicatum*, are to be frequently exhibited; Sorbitions, also, of Tea, and Decoctions of digestive Roots, Woods, and Herbs; every thing which heats the Blood, and all Foods difficult of Digestion, or taken plentifully, are to be carefully avoided. When

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the Heat is very violent, it may not be improper to mix a little Nitre with the above-mentioned Powders, and some Drops of the Spirit of Vitriol, or of Sulphur, with the Patient's Drink; and if he be plethoric, Blood may be taken from the Arm.

If the Disorder arises from a Venereal Infection, Purgatives, mixed with *Mercurius Dulcis*, seem necessary, and all those Remedies which are proper against the Venereal Disease. Nor are warm Drinks of Tea, or Pisans made of Barley, Liquorice, and Anise boiled in Water; to be omitted, which not only serve to temper and attenuate the Blood, but, also, to dissipate the Inflammation.

If the Surgeon be called too late, or if the Inflammation be too violent to yield to the above discutient Remedies, a Suppuration, or Gangrene is generally the Consequence. Therefore, the Application of the same suppurative Medicines, which are directed under the Article MAMMA, become necessary. When the Pus is ripened, and the Abscess does not quickly burst spontaneously, it must be carefully opened with the Knife, and the Matter being discharged, let the Wound be deterged with some digestive Ointment, and some spirituous Injections which resist Putrefaction; then heal the Wound with some vulnerary Balsam. But in digesting the Matter, and diminishing the Pains, the Plaster of Henbane, and, also, of Diachylon, with the Gums, are very efficacious; and, in the mean time, particular Care must be taken to remove the Venereal Taint. Altho', in these Cases, the *Scrotum* is often so consumed, that the Testicle is exposed to View, yet, if digestive and balsamic Medicines be properly apply'd, the lost Substance of the Scrotum may be restored, as I have often observed. *Heister's Surgery.*

See the Method of removing Tubercles of the Testicles, and that of Castration, under the Article HERNIA.

TESTICULUS MORIONUS. A Name for the *Orchis*; *morio*; *mas*; *foliis maculatis*; and for the *Orchis*; *morio-femina*.

TESTUACEUS, or TESTUACEUS PANIS. Bread bak'd on a Tile, or in an earthen Vessel.

TESTUDO TERRESTRIS. Offic. Schrod. 5. 333. Ind. Med. 116. Bellon. de Aquat. 52. Aldrov. de Quad. Ovip. 705. Gesn. de Quad. Ovip. 107. Charlt. Exer. 30. Jonf. de Quad. 144. *Testudo terrestris vulgaris*. Raii Synop. 3. 243. THE LAND TORTOISE.

The recent and crude Blood is prescribed in an hectic Fever; and the same, dry'd, is recommended for the Epilepsy.

TESTUDO MARINA. Offic. Schrod. 5. 333. Bellon. de Aquat. 50. Schonef. Ichth. 74. Gesn. de Quad. Ovip. 113. Aldr. de Quad. Ovip. 712. Charlt. Exer. 30. Jonf. de Quad. 147. *Testudo marina vulgaris*. Raii Synop. A. 254. THE SEA TORTOISE, or TURTLE.

The Parts in Use are the *Legs*, the *Penis*, and the *Gall*. The Legs are worn as a most approved Amulet against the Gout; and the Gall is good for the Eyes. *Schroder. Ligon. de Insula Barb.* commends the Penis in nephritic Disorders.

TESTUDO PALUSTRIS. Offic. *Testudo nigra palustris*. Ind. Med. 116. *Testudo lutaria palustris*. Schw. Rept. 164. *Testudo aquarum dulcium & lutaria*. Raii Synop. A. 254. Jonf. Quad. 146. *Testudo aquatica*. Charlt. Exer. 30. *Testudo lutaria*. Rondel. de Aquat. 2. 229. *Testudo Aquæ dulcis, & lutaria*. Aldrov. de Quad. Ovip. 710. *Testudo quæ in Aqua dulci vivit*. Gesn. de Quad. Ovip. 110. THE WATER TORTOISE.

The Blood and Gall agree in Virtues with the other Tortoises: The Tortoise is so named from *Testa*, a Shell; this Animal being covered with an hollow Shell of a peculiar Kind, and remarkable for the Largeness of its Size, Solidity, and Beauty, which is shaped like a Shield, and diversified with Variety of Colours. Its Head and Tail resemble those of a Serpent, and its Feet are like the Feet of a Lizard.

Tortoises are of four Sorts. 1. Land Tortoises. 2. Sea Tortoises. 3. Fresh-water Tortoises. 4. Mud Tortoises, which live in muddy Places. They are mostly amphibious; but some Authors except the Land Tortoises.

The Land Tortoise is found in Mountains, Forests, Woods, Fields, and Gardens. It lives upon Fruits and Herbs, Worms, Snails, and other Insects; and may be fed in Houses, with Bran and Flour. In Winter they conceal themselves in Holes, like Serpents and Lizards, where they continue without any Food, as several other Animals do. They live long, move very slowly, and are said to have a natural Aversion to the Eagle, which sometimes seizes them, and carries them off, in order to devour them. *Aristotle* says, they fight with Serpents and Vipers, and that they are always provided with the Plant called *Cumila*, or Savory, for curing the Stinging of those Animals. *Pliny* says, that this kind of Turtle is very plentiful in *Africa*, and is much used for Food. Some Authors recommend the eating of it in *August* and *September*, when it is fattest.

The Sea Tortoises sometimes go ashore, where they fall asleep; and, if they continue long there, they die. In the Sea they feed upon Shell-fish, and, when upon Land, they eat Herbs. It is said, that, when their Heads are cut off, they will live some time, and they will bite very hard.

*Pliny* says, there are Sea Tortoises in the *Indies* so large, that the Shells of each of them are big enough to cover small Houses, and



and the Inhabitants make some of them into Bays, with which they sail into the Islands of the *Red Sea*.

There is but little Difference between the Fresh-water Tortoises, and those which live in muddy Places; they feed upon Herbs, and watery Insects; they live more by Water than Land; and, it is said, a long time without Food.

The Flesh of the Tortoise is very good, and like Veal. It is strange, that *Galen*, and others, who have treated of Food, should never mention this Animal; for it is much used.

The Flesh of Tortoises is very nourishing, and is solid and durable Food; for it contains an oily, balsamic, and saltish Juice. Upon account of this Juice, also, it is restorative and pectoral; and, for phthical and hectic Patients, a Syrup is made of the Flesh, which is excellent for qualifying the sharp Humours of the Breast. In the mean time, it is hard and viscous, and not easily digested, breeding viscous and gross Humours, and producing Dulness and Laziness; therefore, it ought to be well boiled, and seasoned with such Things as help Digestion.

*Cardan*, in his ninth Book, assures us, that the Flesh of the *African* Tortoises, being eaten with Bread for several Days together, is an excellent Remedy against the Leprosy. The Blood of the Tortoise, being dried, is reckoned good for curing the Falling Sickness, giving a Dram of it for a Dose.

In some Countries, an Oil proper for burning is extracted from the Tortoise. *Lemery on Foods*.

#### TETANUS.

The Neck is subject to some very violent Disorders, than which none are more troublesome and acute, than that in which, by reason of a certain Rigor of the Nerves, the Head is immovably reclined to the Scapulae; that in which the Chin is fixed to the Breast; and that in which the Neck is straight, but yet immovable. The first was, by the *Greeks*, called *Opisthotonos*, the second *Emprosthotonos*, and the third *Tetanus*; tho' some, without any regard to Accuracy, confound these Words together. These Disorders prove mortal within the fourth Day; and, if they continue beyond it, they are without Danger.

'Tis universally agreed upon, that all these Disorders are to be cured in the same manner; and, for this Purpose, *Aesclepiades* ordered Venesection, which, according to others, was not to be used, because, under these Disorders, the Body was destitute of a due Degree of Heat, which, residing in the Blood, would, of course, be lessened by a Diminution of that Fluid. This Doctrine is absolutely false, since the Blood is not naturally hot, but quickly becomes either hot or cold, in consequence of what happen in the Animal Oeconomy. But whether Venesection is expedient, may be collected from the Circumstances and Situation of the Patient. In these Disorders it is proper to exhibit Castor in Conjunction with Pepper or Laser. Dry and moist Fomentations are, also, necessary; for which Purpose many, now-and-then, pour large Quantities of warm Water on the Necks of Patients afflicted with these Disorders. But though this Practice affords immediate Relief, it is not to be used, because it renders the Nerves more susceptible of the Injuries of the Cold.

It is, therefore, more expedient, first, to anoint the Neck with a liquid Cerate, and then to apply Oxens Bladders, or small Phials full of warm Oil, or a Cataplasim of warm Meal, or of Figs and Pepper beat up together. But, among all the Measures taken for the Cure of these Disorders, none is more effectual, than to hold the Patient's Neck over a Vessel full of warm Water, in which a considerable Quantity of Salt is included in a Linen Bag. When these Steps have been taken, we must place the Patient before the Fire; or, if it is Summer, expose him to the Influence of the Sun, and carefully rub his Neck, *Scapulae*, and Spine, with old Oil, and if that cannot be had, with *Syrinc* Oil; or, if that is, also, wanting, with the oldest Fat that can be had.

As Friction is serviceable to all the Vertebrae; so 'tis, in a particular manner, beneficial to those of the Neck; for which Reason this Practice is to be used both in the Day and Night, only allowing some Intervals, during which we are to apply a Malagma, consisting of heating Ingredients. The Patient is, also, to be carefully preserved from Cold, for which reason his Room ought always to have a Fire kept in it, especially about the Twilight, when the Coldness of the Air is generally augmented. It is, also, expedient to shave the Head, which being anointed with the *Oleum Irium*, or the *Oleum Cyprinum*, is to be covered with a warm Cap. It is, also, sometimes proper to bathe the whole Body, either in Oil by itself, or in warm Water, in which Fennugreek has been boiled, adding a third Part of Oil. By rendering the Body soluble, the Strictures of the superior Parts are, also, frequently relaxed.

But if the Pain becomes very intense, Cupping with Scarification, is to be apply'd to the Neck; and the Incisions made in the Skin are to be burnt either by Synopsims, or proper Instruments. When the Pain is alleviated, and the Head begins to move, we are sure that the Disorder yields to the Influence of the Remedies. But the Patient is long to abstain from all Kinds of high Food, and only use Sorbitions, poach'd Eggs, and Broths prepared of young Fowls, and other soft and light Fleashes. If these Measures succeed happily, and the Patient's Neck begins to

seem totally restored to its natural State, he is first to use, only, Pap, or thin Spoon-meat; but he may much sooner eat Bread than drink Wine, which, being highly dangerous, is therefore to be the longer abstained from. *Celsus, Lib. 4. Cap. 3.*

Various Disorders arise from Contractions and Convulsions, of which there are various Species, such as the *Emprosthotonos* and *Opisthotonos*; the former of which is a convulsive Inclination of the Head forwards, and the latter an Inclination of it backwards. The antecedent Causes of these Disorders are Blows and Contusions of the large Tendons, lying long upon them in one Posture, lying with them applied to hard Substances, laying any weighty Thing upon the Neck, drinking strong Liquors, excessive Cold, or, which frequently happens, Wounds of the Nerves and Muscles, and the Drinking Wine before such Wounds are cured. These Disorders, also, most frequently happen by the Use of cold Water, especially at that Time, when such Wounds, being free from Sordes, seem to be deterged, and coming to a Cicatrix; they, also, sometimes happen sooner, and when the Wounds are as yet tumid, or in their worst State. That Species of Contraction, which the *Greeks* call *Spasmus*, is an involuntary Tension and Contraction of the Parts, accompanied with violent and acute Pain, in consequence of the excessive Stricture. But that Species of Convulsion, which they call *Tetanus*, is, by the Followers of *Aesclepiades*, defined an Extension of the whole Body, or of some of its Parts. But, in giving this Definition, they seem to have forgot that some Parts may be extended by the Influence of the Will; and Persons afflicted with a *Satyriasis*, or Gout, have in the former an Extension of the Penis, and in the latter of the Feet, without being afflicted with that Species of Convulsion which the *Greeks* call *Tetanus*. Others define a *Tetanus*, A Convulsion of those Muscles of the Neck and Cheeks, called *Sragonitæ*, in consequence of their violent Tension and Pain. Other Authors of the Methodic Sect, in defining this Disorder, have, instead of Convulsion, used the Word *Conclusio*; but this is only giving different Names to one and the same Thing, for these Writers imagined, that this was the Cause of the Disorder. But in general we may answer all these Writers, by telling them, that there is a great Difference betwixt a Disorder, and its Cause: We must, therefore, ascertain, not what the Cause of Convulsions is, but what Convulsions are; for as the Cause is latent and occult, it must vary according to Opinion and Apprehension. But the Phenomena peculiar to Convulsions or Contractions are obvious, manifest, and perceptible by every one; and it is but reasonable, that, as far as is possible, we should found our Doctrine upon consistent Principles. According to our Sect therefore, that Species of Distension or Extension, which the *Greeks* call *Tetanus*, is an involuntary, rigid, and inflexible Tension of the Neck, in an erect Position, occasioned by a violent Stricture or Tumor of the Parts. An *Opisthotonos* is an involuntary spasmodic Retraction of the Neck, also produced by the Stricture or Tumor of the Parts; and an *Emprosthotonos*, an involuntary Inclination of the Head forwards, produced by the same Causes. Those Disorders are called involuntary, in Opposition to those Motions of the Head, by which, in consequence of the Concurrence of the Will it is held in these Positions. They are also said to proceed from the Stricture or Tumor of the Parts, in Contradistinction to those Positions and Directions of the Head, produced in such as are hanged. Persons about to fall into these Disorders, are generally seized with the following Symptoms; a difficult Motion of the Neck, a continual Oscitation, especially, in the Parts about to be affected: This State is succeeded by an uneasy and painful Posture of Lying; a slight Tension and Hardness of the large Tendons; an uneasy and troublesome Punction between the Spine and the Occiput; a small Difficulty in Drinking; a Pain of the Temples, which is particularly exasperated when the Patients yawn, or open their Mouths; a Dulness of Hearing; a Stammering of the Tongue, and Slowness of Speech; a continual Discharge of the Saliva; a painful Sensation in the Calves of the Legs, and Soles of the Feet. The Countenance is, also, seemingly smiling, without any apparent Cause, and there is a kind of Palpitation in its Parts. When the Disorder seizes, there is a violent Convulsion and Hardness of the Parts of the Neck, and Muscles of the Cheeks, accompanied with excessive Pain; there is a Redness of the Countenance and violent Contraction of the above-mentioned Muscles; the Teeth, also, are strongly clos'd, the Patient is thrown into a profuse Sweat, whilst there is a cold Torpor of the Joints, an obscure Pulse, an Extension of the Neck, a Difficulty of Breathing, a Contraction of the Legs and Arms, and a Regurgitation of any Liquor put into the Mouth through the Nostrils; some are, also, afflicted with an Alienation of Mind, a quick Respiration, and a Rattling of the Throat and Breast. In a *Tetanus*, the Neck is strait, rigid, and inflexible. In an *Opisthotonos*, there is a Reclination of the Head to the posterior Parts, accompanied with an excessive Pain and Tension of the Back and Buttocks; such Patients, also, have their Legs contracted, tho' their Arms are not seized with convulsive Motions; their Fingers are contracted and folded, as *Hippocrates* affirms, and it often happens that they keep their Thumb clenched in the rest of their Fingers; neither can they retain themselves in one



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one Posture, but shift about with a kind of Palpitation, when the Pain seizes them. An Opisthotonos is more dangerous than a Tetanus; and all these Disorders are dangerous, when they are accompanied with Wounds of the more noble Parts, and such as are more immediately subservient to Life. In an Emprosthotonos, the Head is spasmodically inclined forwards, and the Chin fixed to the Breast, the Hypochondria and Præcordia are distended, there is a frequent Inclination to discharge the Urine, and the Patient cannot without Difficulty bend his Fingers. These Disorders are not cured without great Difficulty, if the Spasms should be produced by Wounds, or if there should be a natural Hardness of the Spine; but if the Spasms should happen without a Fever, the Patient is more easily cured. A Fever, according to *Hippocrates*, succeeding the Spasm is salutary; but a Spasm succeeding a Fever, dangerous. This Opinion is, however, rejected by some, who tell us, that according to *Hippocrates* himself, a Fever gives a violent Shock to the Constitution, and produces violent Symptoms accompanied with excessive Pain; for, say they, a natural and moderate Heat relaxes the Tumor of the Parts, whereas the Heat of a Fever, being intense, preternatural, and immoderate, increases and augments it. Hence a Diminution of the concomitant Symptoms of the Disorder, lays a Foundation for the Hopes of future Recovery. *Calvus Aurel. Lib. 3. Acut. Morb. Cap. 6.*

The *Emprosthotonos*, *Opisthotonos*, and *Tetanus*, may be produced by various Causes; for they generally happen after Wounds, when either the Membranes, Muscles, or Nerves are punctured, in which Cases they generally prove mortal; for by Wounds of the Nerves, mortal Convulsions are excited. Women in consequence of Abortion, are also sometimes seized with Convulsions, which frequently prove fatal to them. Others have these Disorders brought on by violent Blows of the Neck; excessive Cold may, also, prove the Cause of them, for which Reason they rage more in the Winter, than in the Spring and Autumn; but very rarely in the Summer, unless a Wound is previously inflicted, or when foreign Diseases rage epidemically. Women are more subject to Convulsions of the Nerves than Men, because the former are of a colder Nature, but they are also more frequently freed from them, because they are of moister Constitutions. As for Persons of different Ages, Children are most infested and afflicted with these Disorders; but they are not generally destroyed by them, because they are in a manner peculiar and familiar to them. Young Persons are less subject to these Disorders than Children, but then they are more frequently taken off by them. Those arrived at the Years of Maturity, are by no means subject to these Disorders, tho' old Persons are greatly infested with them, and are frequently taken off by them; the Reason of which is to be ascribed to the Coldness and Dryness of Old-age, in Consequence of which, they in some measure approach to the State and Condition of a dead Body; for in cold and moist Habits, Convulsions are far less violent and dangerous.

All these Disorders are accompany'd with a Pain and Tension of the Tendons, Spinæ and Muscles of the Jaws and Breast; for these Muscles so fix the superior to the inferior Jaw-bone, that they cannot be easily separated even by Wedges; and when they are violently separated, if any Liquor is poured into their Mouth, they cannot swallow it, but either retain it in their Mouths, suffer it to flow out, or it regurgitates thro' the Nostrils; because the Fauces being compressed, and the Tonsils hard and tense, cannot admit of the Protrusion and Deglutition of Aliments. The Face is red and variegated by Spots of various Colours. The Eyes are almost immoveable, and their smallest Motions accompanied with Pain; there is a great Suffocation and Difficulty of Breathing; the Arms and Legs are seized with Convulsions, and the Muscles palpitate; the Face is distorted in various Manners; there is a Tremor of the Jaw-bones and Lips; a Shaking of the Chin, and a Grinding of the Teeth. In one Patient, I, also, had an Opportunity of observing, with Admiration, a Concussion or Shaking of the Ears, accompanied with a Noise. The Urine is either suppressed, or flows spontaneously, in consequence of the Compression of the Bladder. These Symptoms occur in Convulsions of all Kinds; but the Symptoms, peculiar to each Species, are these: In a Tetanus, the whole Body is straight, immoveable and inflexible, the Arms and Legs are, also, straight.

In an Opisthotonos the Patient is reclined backwards; his Head is drawn back between his Shoulders; his Throat starts out; his Jaws are generally open, and they are rarely united; he snorts in Respiration; his Belly and Breast are prominent; his Urine is generally discharged spontaneously; and his Abdomen, being tense, rebounds, when struck; his Arms are spasmodically drawn backwards; the Legs are, also, distorted and incurvated in a Direction opposite to the Hams.

In an Emprosthotonos, the Back is gibbous; the Hips become prominent, so as to lie in a straight Line with the Back; the Spine is strait; the Head is inclined to the Breast, to which the Chin is fixed; the Hands are clenched, and the Legs extended. All Patients labouring under this Disorder, are afflicted with violent Pains; a mournful Voice, resembling that of a Person weeping, Sighs, and deep Groans. If the Disorder affects the Breast and Respiration, Death is not far off, and it is a great Happi-

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ness to the Patient to be delivered from his Pains, his Distortions, and the deplorable State he was in; so that the nearest Relations can, with a kind of Pleasure, see their Friends exchange their Condition for Death. If Life should still remain, and Respiration continue to be carried on, though in a deplorable manner, the Patient is so incurvated forwards, as to resemble not only a Bow, but a Sphere; so that he has his Head fixed to his Knees; and his Back and Legs so drawn forwards, that the Joint at the Knee seems thrust into the Ham. This Disorder is not only intolerable to the Patient, and moving in the Eyes of Spectators, but, also, incurable; so that those labouring under it, are, on account of their Distortion, disowned by their Friends; and though it would have formerly been Impiety, yet it is now Charity and Compassion, to wish for their Death, even though it should be of the most cruel Kind. Nor can the Physician, when present, either restore Health, mitigate his Pain, or rectify his distorted Figure; and since he might cut him to Pieces, before he could render his Limbs strait, all he can do is to be grieved at this deplorable State. *Aretæus, de Causis & Signis Acut. Morb. Lib. 1. Cap. 6.*

## THE CURE.

In order to cure a Tetanus, the Bed of the Patient is to be soft, grateful, smooth, commodious, and warm; for this Disorder renders the Nerves rigid, hard, and tense; the Skin, also, being every-where dry and rough, becomes tense; the Eye-lids, naturally moveable, wink with Difficulty; the Eyes are fixed, and as it were turned inwards; the Limbs are, also, rendered immoveable, on account of the Tension of the Parts. The Patient's Room, also, even in the Summer-time, is to be kept warm by Fire, though not to such a Degree as to excite Sweats or Languor; because a Tetanus inclines to a Syncope. Other Remedies must, also, be used without any Delay. Whether, therefore, a Tetanus is produced without any manifest Cause, or whether it arises from excessive Cold, Wounds, or Abortion in Women; Venesection is to be instituted in the Arm; but the Ligature must not be too tight, and the Incision must be made gently and expeditiously, otherwise Convulsions of the Nerves will be produced. Let moderate Venesection be only once used; though not to such a Degree as to produce *Deliquiums*, and a Refrigeration of the whole Body. The Patient is not to be harassed by Hunger, which dries and refrigerates the Body. Let him, therefore, drink coarse, strong Muls, and Cream of Ptisan mixed with Honey; for when these are protruded by the Tonsils, they create but little Pain, are easily swallowed, fit for rendering the Body soluble, and effectual for restoring the Strength. The whole Body is, also, to be wrapt up in woollen Cloths, wet in the Oleum Gleucinum, or the Oleum Crocinum, in which Rosemary, Flea-bane, or Mugwort, have been boiled; let every thing be used hot, not only in its Quality, but, also, to the Touch. The Patient is, also, to be anointed with an Ointment prepared of the Limnestides, Euphorbium, Nitre, and Pellitory of Spain, to which a large Quantity of Castor is to be added. The Tendons are, also, to be well covered with woollen Cloths, and the Parts about the Ears and Chin well anointed, since these are most affected, and excessively tense. The Tendons and Region of the Bladder are, also, to be cherished with gently warm Substances; such as Bags full of roasted Millet, or Oxens Bladders half full of warm Oil, applied to the Parts affected. 'Tis sometimes necessary to foment the Head; and, though this Practice is somewhat prejudicial to the Senses, 'tis nevertheless salutary to the Nerves; for though by the Elevation of the Vapours it, in some measure, clouds the Senses, yet it fills the Nerves. The Patients are to be fomented in the softest manner, with a Matter that is not fetid, and which is to be used alone. This Matter may be either inodorous Oil boiled in a double Vessel, and put in Bladders, or fine Salt contained in a Bag: For, though Millet and Linseed are grateful to the Touch, yet fetid Vapours are exhaled from them. The Method of fomenting is this; Laying the Patient on his Back, the Fomentations are to be placed under him, as far as the Crown of the Head, and no farther; but their Influence is not to be permitted to act on the Forehead, which, being the common Sensory, is, therefore the Source of all the favourable, and unlucky Turns of Disorders. If Cataplasms are applied to the Tendons, let the back Part of the Head be elevated; for, if these Cataplasms are applied to the superior Parts, they will fill the Head with the Vapours of the Linseed and the Fenugreek. After the Use of the Cataplasms it will be expedient to apply Cupping-glasses to the Occiput, on each Side of the Spine; but very little Fire is to be used; for the strong Impression of the Lips of the Cupping-glass excites Pains and Convulsions: We must, therefore, make rather a slow and gentle than a sudden and violent Exhaustion of the Air; for by this means the Skin will without Pain be raised into a convex Tumor; and may afterwards have proper Incisions made in it. The Quantity of Blood to be taken from such Patients is to be estimated from their Strength. These are the Measures to be taken in a Tetanus not attended with Wounds.

But if a Convulsion of the Nerves is produced by a Wound, the State of the Patient is deplorable, and almost desperate; the

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Care ought, however, to be attempted, since some by the Use of proper Remedies have been recovered. Besides the other Measures, therefore, the Ulcers are to be cured by anointing them with warm and proper Substances, by Fomentations, Cataplasms, and Medicines which easily excite Heat, and form Pus copiously; for in a Tetanus the Ulcers are dry. For this Purpose take a sufficient Quantity of the Manna of Frankincense, of the Tops of Poley-mountain, of the Resins both of the Pitch and Turpentine-tree, of Marshmallow-roots, and of the Herbs Rue and Henbane; make all into a Cataplasm by melting such as are susceptible of it, adding the Powders of such as are capable of being pulverized; but some of the Ingredients must be macerated in Oil, and the Marshmallows must be previously boiled in Muls. Let Castor be, also, sprinkled on the Ulcers, since that Medicine is very efficacious in exciting Heat in all the Parts of the Body; for Horrors arising from Ulcers are of a very malignant Nature. Let the Nostrils be, also, anointed with Castor, or the Oleum Crocinum. Three Oboli, also, of Castor-oil may be daily exhibited; and if the Stomach loaths it, we must interpose the same Weight of the Root of Laserpitium, or half the Weight of Myrrh; and all these are to be exhibited in Hydromel. But if *Cyrenaic* Laserpitium can be had, the Bulk of a bitter Vetch of it may be exhibited wrapt up in boiled Honey, by which means it is rendered more palatable; for it is of an acrid Taste, and produces disagreeable and ferid Eructations. But if the Patient cannot take it in this Form, let it be dissolved in Hydromel; for it is of all other Medicines the most efficacious. These Medicines are fit for heating, moistening, relaxing Convulsions, and softening the Nerves. But if the Patient can swallow nothing, inject a Clyster, prepared with Castor and Oil, with which, also, mixed with some proper Ointment, or with Honey, the Anus is to be anointed. With the same Clyster, also, mixed to a due Consistence, with melted Wax, the Region of the Bladder is to be anointed. If there is a Necessity for procuring an Evacuation of the Fæces and Flatulences, a Clyster prepared of two Drams of Hiera, with a sufficient Quantity of Hydromel and Oil, is to be injected, which not only procures the designed Evacuation, but, also, cherishes the lower Belly; for Hiera is an heating Medicine suited to various Intentions. *Aretæus de Curat. Acut. Morb. Lib. 1. Cap. 6.*

**TETARTÆUS**, τεταρταῖος. The same as **QUARTANA**.  
**TETHALASSOMENOS**, τεθαλασσομένος. An Epithet for Wine, importing its being mix'd with Sea-water.  
**TETHYA**, or **TETHÆA**. This is a Shell-fish, sometimes found adhering to Oysters. Its Shell is of a spherical Figure, rough, unequal, and less hard than the Shells of other Fishes. There are various Species of this Animal, which are found either adhering to the Rocks, in the Wrack, or on the Shore. Its Flesh is fungous, carminative, proper to cure the windy Colic, Pains of the Kidneys, and the Sciatic Pain. It is, also, proper to excite a Discharge of the Urine, and to eliminate the Stone of the Kidneys and Bladder. *Lemery, Traité des Drogues.*  
**TETLATIAM**, seu *Arbor Urens*. Nieremberg. An Indian Tree, which agrees in Qualities with the *Manchineel*.  
**TETRABIT**. A Name for the *Sideritis*; *hirsuta*; *procumbens*.

**TETRADRACHMON**. The Weight of four Drams.  
**TETRAGNATHUS**, τετραγνάθος, from τέσσαρες, four, and γνάθος, a Jaw, is a Species of *Phalangium*, of a whitish Colour, with scabrous Legs, and near the Head two Eminences, one strait, the other broad, so that you would think it had two Mouths; it has four Jaws, (whence the Name *Tetragnathos*) and an even Line through its Mouth.

They who are stung by this Spider, labour under the same Symptoms in general, as they who are stung by the Scorpion; and besides, are affected with a tensive Pain in the wounded Part, which becomes whitish. The Head and Face, also, swell; and the wounded Parts, as far as the Joints, become extenuated; the Members, also, receive no sensible Nourishment, and the Patient, even after Recovery, is molested with obstinate Watchings.

Remedies in this Case are Calamint, Trefoil, Rue, Panax, Polium, taken in Wine, and all such Medicines as are proper for those who are stung by the *Phalangium*. *Actius, Tetrab. 4. Serm. 1. Cap. 17.*

**TETRAGONIA**. A Name for the *Euonymus*; *vulgaris*; *granis rubentibus*.

**TETRAGONOCARPOS**.

The Characters are;

The Leaves are dispos'd in a scattering manner: The End of the Pedicle becomes an Ovary, on whose Apex grows a Flower or Calyx, which is quadrifid, rarely quinquefid, expanded, and furnished with a Multitude of Stamina, that is to say, eighteen or twenty. The Ovary is furnished with four erect Tubes, and becomes a quadricapsular Fruit, with a single Seed in each Capsule. In some Plants the Calyx is seated under the Ovary and Flower.

*Boerhaave* mentions three Sorts of *Tetragonocarpus*; which are,

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1. *Tetragonocarpus*; *Africana*; *fruticans*; *foliis longis*, & *angustis*. *H. A. 2. 205.*

2. *Tetragonocarpus*; *præcedenti similis*; *fructu rotundo*, *tetragono*, *umbilicato*.

3. *Tetragonocarpus*, *Afra*, *folio Portulacæ longo*; *flore herbaceo*. *Boerb. Ind. alt. Plant. Vol. 2.*

I find no Virtues ascribed to any one of these.

**TETRAGONON**, τετραγωνον, from τέσσαρες, four, and γωνία, an Angle, in *Hippocrates de intern. Affect.* seems to be a Medicine for purging the Head; as where he says, *καθαίρειν τῷ τετραγώνῳ*, "and purge the Head with *Tetragonum*;" and directs the same in another Place of that Treatise. *Galen* seems to expound this in his *Exegesis* as follows: *Τετραγώνῳ τινὲς μὲν ταῖς εὐρισκομέναις κατὰ τὸ εἶμμι πλαζί τινὲς αὐτὸ τὸ εἶμμι*. "Some by *Tetragonum* understand the Crufts "which are found about Antimony, some Antimony itself". The same Author expounds *τετραγῶνα βέλη*, "quadrangular "Arrows," by *τὰ τέσσαρας ἔχοντα γωνίας*, (Arrows) "having "four Points, or Edges." *Eusebius*.

*Tetragonon* in *Hippocrates*, is a very obscure Word; for we are not certain whether he means by it a Medicine or Instrument; the Meaning thereof was unknown even in the Time of *Galen*, as appears above; and it is still a Question whether Antimony were known to *Hippocrates*. *Schultzius*.

**TETRAMYRON**, τετραμύρον. The Name of an *Acoron*, describ'd by *Galen*, *L. 7. de Comp. M. P. G. Cap. 12.*

**TETRAO**. The Name of a large Bird of the Bustard-kind. *Aldrovandus*.

**TETRAPHARMACON**. A Name for any Medicine compounded of four Ingredients. Thus the *Emplastrum Basilicon*, and the *Diatefferon*, are both call'd by this Name.

**TETRESARIUS**. Half an Ounce. *Marcellus Empiricus*.

**TETROSOL**. The Weight of four Oboli.

**TETROSOS**, τέτροσος. The same as **QUATRIO**.

**TETY-POTE-IBA**, *Vitis arbutiva* *Pisonis*, is said to be produced from the Dung of the Birds called *Tetyus* deposited by Orange-trees, with which it closely unites, and in time over-spreads and kills.

Of the Roots and Branches bruised together, and then fry'd in common Oil, is prepared an excellent Medicine for Inflammations of the Belly and Feet, contracted from Cold. *Raii Hist. Plant. Index.*

**TEUCHOS**, τεῦχος. *Hippocrates* uses this to express the whole Body.

**TEUCRIUM**.

The Characters are;

The Calyx is tubulated, quinquefid, or Bell-shaped, and inclosing in its Bottom roundish Seeds. The Flower, which has nothing of a Galea, is unfolded from a very short Tube into five large Segments. In the Place of a Galea arise Stamina; the Beard is quinquefid, the middle Segment being excavated, and the other seated opposite to one another in the Neck of the Flower; the Flowers proceed from the Wings of the Leaves.

*Boerhaave* mentions eight Sorts of *Teucrium*; which are,

1. *Teucrium*; calyce tubulato; flore pallide luteolo. *Boerb. Ind. A. 181. Teucrium*. Offic. C. B. P. 247. *Raii Hist. 1. 526. Teucrium multis*. J. B. 3. 290. *Teucrium latifolium*. Ger. 532. Emac. 654. *Teucrium majus vulgare*. Park. Theat. 103. *Chamaedrys frutescens*; *Teucrium vulgo*. Tourn. Inst. 205. **TREE-GERMANDER**.

It grows in *Italy* and *Sicily*, and flowers in Summer, and the Leaves are in Use.

*Teucrium* heats and dries, cures Disorders of the Liver and Spleen, and is effectual against the Bites of Serpents. As it has the outward Appearance of the *Chamaedrys*, so it resembles it in Virtues. *Dale*.

2. *Teucrium*; calyce tubulato; flore purpureo. *Chamaedrys, cretæa Teucrii Folio, purpureo*. Flor. 2. 83.

3. *Teucrium*; Boeticum; calyce campanulato. *Chamaedrys, fruticosior, flore violaceo, foliis subtus incanis*. M. H. 3. 422.

4. *Teucrium*; Boeticum; calyce companulato, folio eleganter variegato.

5. *Teucrium*; calyce campanulato; *Stœchados facie*. *Boerb. Ind. A. 181. Polium Creticum*. Offic. *Polium angustifolium Creticum*. C. B. P. 221. Park. 25. *Raii Hist. 1. 523. Teucrium frutescens, Stœchadis Arabicæ folio & facie*. Tourn. Cor. 14. *Rosmarinum Stœchados facie*. Alp. Exot. 103. **POLEY OF CANDIA**.

This Species of *Polium* is very rarely to be met with in the Shops: It is a smaller tenderer Plant, having lesser and narrower Leaves, not at all indented about the Edges, but as woolly as the *Polium montanum*, and having the like Heads of Flowers, of a finer and more agreeable Smell. It grows in the Island of *Crete* or *Candia*.

It is much of the Nature of the *Polium montanum*, but is rather stronger; and if it could be procured, is what ought to be used when *Polium Creticum* is prescrib'd; but, as it is hardly to be met with, the other may be used without much Detriment to any Composition. *Miller's Bot. Off.*

6. *Teucrium*



6. Teucrium; calyce campanulato; laciniatum; flore magno subcœruleo.

7. Teucrium; calice campanulato; laciniatum; flore parvo subcœruleo.

8. Teucrium; calyce tubulato; Creticum, purpureum. *Chamaedrys fruticosa, Cretica, purpureo flore.* T. 205. Boerb. Ind. alt. Plant.

TEUTHROBANON. A Name for the *Polygonum*, in *Oribasius, Collect. Medicinal.*

TEUTLON, τεῦτλον, σέυτλον. A Name for the BETA. *Blancard.*

TEUTLOPHACE, τευτλοφακή, from τεῦτλον, a Beet, and φακή, a Lentil. A Sort of Food consisting of Beets and Lentils, and prescribed by *Heraclides Tarentinus*, as *Galen, L. 1. de Al. Fac. C. 18.* says, not only to sound, but sick Persons.

TEXOCTLIFERA *Mexicana* Nieremberg. Is a Tree of a moderate Bigness, growing spontaneously in hilly Places, very thick set with Thorns, and with Leaves like those of our Apple-trees, but rougher, and serrated. It bears Apples resembling ours, but small, and no bigger than Walnuts, of a yellow Colour, and very hard before they are ripe; but afterwards soft, in a minner, like Fat, of an unpleasant Taste, tho' grateful to many Palates. The Seeds, of which there are three in each Apple, are lunated, large, and distinguish'd by two Angles, and a Ridge, and as hard as a Stone. The *Mexicans* first suffer them to putrefy, and then bring them to Market. To preserve them the longer from Corruption, they sprinkle them with Water of Nitre. The Buds, bruised, and apply'd with Water, cure Exanthemata. *Raii Hist. Plant.*

TEXTURA, Texture, is properly spoken with respect to the *Ars textoria*, or *Art of Weaving*; but is apply'd by Metaphor to the organical Structure of the Body, in which Sense we, also, use the Word *Contexture*.

Θ, the first Letter of the Word θάνατος, "Death," and used by *Hippocrates* in the *Epidemics*, as a Sign or Mark of Death; as Γ, the first Letter of the Word υγία, Health, was a Mark to signify Recovery. *Galen, Com. 1. in 3 Epid.*

THACOS, θᾶκος, the same as θῶκος, *Thocos*, a Seat, a Place to sit on. *Hippocr. 7 Epid.*

THAIS, θάις, a Name for a cosmetic Cerate, to give a beautiful Red to the Face, described by *Ægineta, Lib. 3. Cap. 25.* Also, a Bindage for the Head, of which *Galen de Fasciis* reckons three Kinds.

THALAME, θαλάμη. A Bed, or Hole, where Fish lie; θαλάμαι in *Erotian* are expounded καλὰ δόσεις, Dens, Nests, Burrows. The Word occurs in *Hippocrates, Lib. περὶ τέχνης*, where you read, καὶ τέλει ἔδεν ὅτι ἔχ' ὑπαφρόν ἐστι, καὶ ἔχον περὶ αὐτὸ θαλάμας. "And of these (Joints) there is none but what "is somewhat spumeous, and furnished with Cells." He is here speaking of the internal Cavities about the Joints, which are full of a sort of Spume or Mucus. Some Copies, however, for ὑπαφρόν read ὑπόφορον, and *Erotian* reads ὑποφρον, which signify, with not much Variation of the Sense, occult, cavernous, or full of Cells and Perforations; but ὑπαφρόν seems to be the true Reading.

THALAMUS, θάλαμος. A Bed, in Anatomy, is the Place from which the Optic Nerves proceed; so called by *Galen de Usu Part. Lib. 16. Cap. 3.*

THALASSERON, θαλασσηρόν. The Collyrium of *Hermophilus* so called; a Remedy adapted to Catarrhs, and Dimness of Sight; and described by *Galen, de C. M. S. L. Lib. 4. Cap. 7.* and *Æginet. Lib. 7. Cap. 16.*

THALASSITES, θαλασσίτης. The same as TETHALASSOMENOS; which see.

THALASSOMELI, θαλασσόμελι, from θάλασσα, the Sea, and μέλι, Honey, is, as *Dioscorides* says, supposed to be a potent Cathartic. It is composed, he tells us, of equal Portions of Rain-water, Sea-water, and Honey, strained, and exposed to the Sun in a pitch'd Vessel, during the Heat of the Dog-days. Some take two Parts of Sea-water, and one Part of Honey, and put them in a Vessel; and this Composition is milder, and more gentle in Operation, than Sea-water alone. *Dioscorides, Lib. 5. Cap. 20.*

THALÆROS, θαλερός, from θάλλω, to bud, or blossom; florid, as apply'd to πνεῦμα, Respiration, can mean nothings, as *Galen* says, *Com. 2. in 1 Proverb. 39.* but σφόδρα μέγα, "vastly great." The same Author, *ibid. Text. 92.* tells us, that the Interpreters of *Hippocrates*, who read θαλερόν, (for he himself, with the Generality, reads θαλερόν with an ο, in both the Places mention'd) expound it by θάλλον, καὶ ἀκμαζόν, καὶ μέγα, "flourishing, vigorous, and great." See THOLERON. Θαλερόν πνεῦμα, in *Galen's Exegesis*, is however, expounded, by θερμὸν ὡς ἀπὸ ἡλίου, παρὰ γὰρ τὸ θέρειναι γέγονε τοῦτομα, "heated as by "the Sun; for the Name is derived from θέρωμαι, theromai, (signifying to be heated). But some Copies read the Place θαλερόν πνεῦμα, μέγα καὶ δεινωμένον, "a florid Respiration, "that is, a great and heighten'd Spirit or Respiration." Thus θαλερόν δακρύ, *Hom. Il. B. v. 266.* when we read θαλερόν δέ τι ἐκπεσε δακρύ, is expounded by the Scholiast θερμὸν καὶ ἀκμαζόν, "hot and vigorous," importing that the hot Tears gushed out in a violent and plentiful manner, as from a Source that would

never dry. In this Sense θαλερόν δακρύ, in *Hesychius*, is expounded by τὸ πολὺ, καὶ ἡ ξηραίνόμενον, ἀλλ' ἐπὶ τῶν ὀφθαλμῶν ἀεὶ θάλλον, "plentiful, and never dry'd, but always springing up "in the Eyes." Θαλερός is, also, expounded in *Hesychius* by ταχύς, quick, and ισχυρός, strong; but θαλερόν πρῶτον, "a "florid Countenance," is explain'd in *Galen, Com. 2. in Proverb.* τὸ οἶον εὐεκκτικὸν καὶ εὐχρῶν, "such as is of a good Habit and "Colour."

THALICTRUM.

The Characters are;

The Root is fibrous, except in the last Species; the Leaves are lobated, tripartite, and resemble those of umbelliferous Plants. The Flower is naked, tetrapetalous, or pentapetalous, rosaceous, with caducous Petals, furnished with Multitudes of Stamina, dispos'd round the Basis of the Ovary in form of an Umbella. The Ovary consists of a Multitude of small Capsules, winged or not winged, furnished with a long Tube, and containing each a single Seed, which is generally of an oblong Figure.

*Boerhaave* mentions fifteen Sorts of *Thalictrum*; which are,

1. *Thalictrum*; *Canadense*. *Corn. 186.*

2. *Thalictrum*; *Canadense*; majus; caulibus viridantibus. *Flor. 29.*

3. *Thalictrum*; *Canadense*; caule viridescente & purpurascence; staminibus saturatus purpurascens.

4. *Thalictrum*; majus; florum staminibus purpurascens. *C. B. P. 327.*

5. *Thalictrum*; foliis amplissimis; rugosis; florum staminibus albis.

6. *Thalictrum*; majus; siliqua angulosa, aut striata. *C. B. P. 336. Boerb. Ind. A. 44. Tourne. Inst. 270 Thalictrum. Offic.*

*Thalictrum seu Thalictrum majus.* *Ger. 1060. Emac. 1251. Raii Hist. 1. 403. Synop. 3. 203. Thalictrum majus vulgare. Park. Theat. 263. Thalictrum nigrius caule & femine striato. J. B. 3. 486. MEADOW-RUE.*

It delights in watry Places, and is commonly found on the Banks of running Streams, and flowers in June.

The Leaves, mixed with other Greens, are somewhat laxative, according to *Dodonæus*; but a Decoction of the Root is more so. It may very well be substituted for Rhubarb. *D. Palmer.*

In some Parts of Italy, as we are assur'd by *Camerarius*, they use the *Thalictrums* against the Plague; in Saxony, for the Jaundice. *Raii Hist. Plant.*

It cicatrizes old Ulcers, *Dioscorides*. It is aperitive, inciding, and provokes Evacuation by Stool and Urine. An Ounce or two purge like Rhubarb, whence it is called in Germany the *Poor's Rhubarb*, and *Tartary Rhubarb*. *Dale.*

7. *Thalictrum*; montanum; album; alius. *C. B. P. 337.*

8. *Thalictrum*; majus; flavum; staminibus luteis vel glauco folio. *C. B. P. 336. Boerb. Ind. A. 244. Tourne. Inst. 270. Pseudo-Rhabarbarum. Offic. Thalictrum speciosissimum glaucum femine & caule striato. J. B. 3. 486. Raii Hist. 1. 403. Thalictrum majus album Hispanicum. Park. Theat. 264. Thalictrum majus Hispanicum. Ger. Emac. 1252. SPANISH MEADOW-RUE.*

It grows in Meadows, and is cultivated in the Gardens of the Curious, and flowers in Summer; the Part in Use is the yellow bitter Root, which agrees in Virtues with the former, and is sold in the Herb-shops for Rhubarb. *Ruppini.*

9. *Thalictrum*; pratense; angustifolium. *C. B. P. 337. Ruta, pratensis, major, angustifolia. Tab. Germ. 121.*

10. *Thalictrum*; pratense; angustissimo folio. *C. B. P. 337.*

11. *Thalictrum*; minus. *C. B. P. 337.*

12. *Thalictrum*; minimum; scetidissimum. *C. B. P. 337.*

13. *Thalictrum*; minimum; montanum; atrorubens; foliis splendentibus. *Raii Syn. 100.*

14. *Thalictrum*; *Canadense*; minus.

15. *Thalictrum*; minus; grumosa radice; floribus majoribus. *Flor. 29. Ranunculus, Thalictri folio, Asphodeli radice. M. H. 2. 438. Oenanthe foliis Hederæ. C. B. P. 163. Boerb. Ind. alt. Plant. Vol. 1.*

The Name is ancient, and is found in the Copies written two ways, *ῥαλὶκτρον* (*Dalichtron*) and *ῥαλὶχτρον* (*Thalichtron*); but now the Name *Thalictrum*, universally obtains, being deriv'd of θάλλω, (*thallo*) to be green, and flourishing; whence it was used at Weddings, and regarded as an Ornament to Gardens. It was, also, called πύγανον (*Peganon*), Rue, because some Botanists have reckon'd it a Species of Rue.

I do not remember any medicinal Uses of this Plant, except of the sixth Species, whole Root, which is very large, being taken up in Season, and given to the Quantity of one or two Ounces, purges like Rhubarb, penetrating through all the Passages with its salutary Juice. Hence it communicates both Colour and Smell to the Urine, which it renders of a golden Colour, tinged, also, the Faeces and Saliva. This Plant therefore, is an excellent Aperitive, corroborating and strengthening the Intestines like Rhubarb; but then the Dose ought to be triple that of Rhubarb. It is commonly said to purge Bile. The Flowers are effectual in Spitting of Blood, the Fluor Albus, and other female Disorders; externally they are of Service, in the Scabies, all cutaneous Diseases, Wounds, and Ulcers. The



# THA

Flower of the thirteenth Species is invisible to the naked Eye, but appears through a Microscope tetrapetalous. *Hist. Plant. adscript. Boerhaav.*

THALLIA, *Thallos*, *θαλλία*, *θαλλε*, a Bud of any Vegetable, but especially of an Olive-tree. *Aeginet. Lib. 5. Cap. 66. Rhod. in Scribon. N° 142.* expounds it by an Olive-branch, of which they composed Garlands on Festivals.

THALPOS, *θάλλος*, from *θάλλω*, to cherish, foment. The same as *θερμός*, *Thermotes*, Heat. The Word occurs 3 *Aph.* 1. and 5.

THALPSIS, *θάλλις*, of the same Original with the preceding. A Fomentation. *Moschion de Morb. Mul. Cap. 126.*

THAMAR, an Arabic Word for *Dactylus*, a Date; whence the Name of a Confection, *Diatthamarou*, corruptly *Diacamarou*. *Blancard.*

THAMARINDUS. The same as TAMARINDUS.

THAMATICA. See THAUMA.

THAMES, THAMINOS, *θαμνός*, *θαμινός*, and the Adverbs, *θαμνώς*, *θαμινά*, *Thameos*, *Thamina*, import Frequency, and often occur in *Hippocrates*.

THAMNA. The same as LORA; which see.

THAPHNEUS, a Medicine cleansed and purified. *Rulandus.*

THAPSIA.

The Characters are;

The Root is generally thick and milky, but in some Plants is fibrous; the Leaves are, for the most part, finely cut. The Seed is long, striated, and surrounded with a very large foliaceous Wing, emarginated on both Sides.

*Boerhaave* mentions nine Sorts of *Thapsia*; which are,

1. *Thapsia*; *latifolia*; *villosa*. *C. B. B. 148.*
2. *Thapsia*; *foliis Libanotidis*; *foetidissima*. *C. B. P. 148.*
3. *Thapsia*; *foliis Apii*; *Lusitanica*; *foetidissima*; *flore albo*.

T. 322.

4. *Thapsia*; *foliis Apii*; *foetidissima*; *flore luteo*.

5. *Thapsia*; *renuiori folio*; *Appula*. T. 322. *Panax Asclepium*, *femine folioso*. *C. B. P. 158.*

6. *Thapsia*; *Orientalis*; *Anethi folio*; *femine eleganter crenato*. *Tourn. Cor. 22. Boerb. Ind. A. 60. Gingidium. Offic. Gingidium Fœniculi folio*. *C. B. P. 151. Gingidium verum Syriacum*. *Park. Theat. 890. Anetho similis planta femine lato laciniato*. *J. B. 3. 7. Raii Hist. 1. 416. ORIENTAL PICKTOOTH.*

It grows in the Eastern Countries, and flowers in Summer, and the Leaves are in Use.

The *Thapsia* provokes Urine; and the Decoction of it taken, with Wine, is good for the Bladder; and, eaten as other Greens, whether raw, boiled or pickled, is very beneficial to the Stomach. *Dale* from *Dioscorides*.

7. *Thapsia*; *Alpina*; *lucida*; *Thalictri aut Carotæ folio*; *flore albo*. *Bocc. Mus. p. 2. 84. Tab. 77.*

8. *Thapsia*; *five Turbith Garganicum*; *femine latissimo*. *J. B. 3. 2. 50. Tourn. Inst. 322. Boerb. Ind. A. 60. Raii Hist. 1. 418. Thapsia. Offic. Turpethum Garganicum*. *Schrod. 4. 250.*

DEADLY CARROTS.

The Roots of this Plant are long, but not very thick, with many large winged Leaves, not much unlike common Carrot, but having the Segments each set opposite to one another, somewhat rough and hairy; the Flowers are small, yellow, and five-leav'd, growing in Umbels at the Top of the Stalks; and are succeeded by flat broad Seeds, having a thin scaly Skin on each Side, of an hot Taste. It grows in *Italy* and *Spain*, and flowers in *July*.

The Root only is used, and that very rarely, being accounted of a poisonous Nature, working upwards and downwards with great Violence, and has been formerly sold in the Shops for the *Radix Turpethi*. *Miller's Bot. Off.*

This Plant is sometimes cultivated in the Gardens of the Curious; and the Part used is the long and acrimonious Root, which is black without, and white within. *Mesue* calls it black *Turbith*, and employ'd it to evacuate thin Humours. The old Women of *Salamanca* in *Spain* used the Root to provoke the Menfes, and with Emollients to promote other Evacuations, as we are assur'd by *Chusius*.

9. *Thapsia*; *maxima*; *folio latissimo*. *C. B. P. 148. Boerb. Ind. alt. Plant. Vol. 1.*

*Thapsia* takes its Name from the Island *Thapsos*, where it was remarkably plentiful.

The Antients expressed a Juice from this Plant, which they made use of when they thought violent Purging necessary; for the Juice of the Root, inspissated, and given to the Quantity of an Ounce, purges upwards and downwards, so as sometimes to produce an Inflammation of the Stomach and Intestines; whence a Dysentery is occasion'd. The same is so highly acrimonious as to cause Convulsions, succeeded by very bad Symptoms, as *Chusius* very well observed; which are not to be removed but by a Draught of Vinegar, Oil and Water, for which Reason I would not have this Plant used inwardly. The Root has been sold for the *Turbith* of the Antients, but with very mischievous Consequences; for the Roots of the first, third, fourth, and ninth Species, are no less caustic than that of the eighth. Externally they are of Use in Ointments for the Itch, and the like Diseases. *Hist. Plant. adscript. Boerhaav.*

# THE

THAPSIA is, also, a Name for the *Seseli*; *quæ Ferula facit*, *Thapsia*, *sive Turbith Gallorum*.

THAPSUS. The same as TAPSUS BARBATUS; which see.

THARRAS. The Name of an Inventor of a digestive Magma for a Dropsy of the Uterus, which is to be apply'd under a triple Cloth, and secur'd with a Bandage, but not too tight.

This was pretty much in Use in *Celsus's* Time, as he observes, *Lib. 3. Cap. 21.* but he no-where describes it.

THAUMA, *θαῦμα*, properly a Miracle; but it is taken in a special Sense for an automatus Machine used in Plays and Representations; whence *Ars Thaumaturgus*, corruptly *Thamatica*, is the Art of constructing or managing these Machines; and *Thaumaturgus* or *Thaumaturgus*, the Contriver or Manager of the same.

THEA. *Offic. The Sinensum sive Tsia Japonensibus*. *Breyn. Cent. 1. cap. 52. 111. The Sinensum sive Tsia Japonensibus. Breynii. Raii. Hist. 2. 1619. Eonymo affinis Arbor Orientalis nucifera flore roseo*. *Pluk. Phytog. Tab. 88. Fig. 6. Almag. 139. The Chinensum, sive Tschia Japonensium*. *Hort. Amst. 346. Chaa Herba in Japonia*. *C. B. P. 247. Styraci & Eonymo medice affinis. THE THEE or TEA PLANT.*

Tea, so much in Use of late Years, is a shrubby Bush, seldom growing above four or five Feet high, full of Branches clothed with dark-green ferrated Leaves, set on the Branches without any Order, somewhat of an oval Shape, but sharp-pointed at the End: Among these come forth several pretty large Flowers, made of five round white, or pale-yellow Leaves, with several Stamina in the middle; and in their Places come the Fruit, containing, for the most part, three round Berries or Seeds, though sometimes only two, and sometimes but one, covered with a brownish Husk; they seldom gather the Leaves from the Shrubs, till the Plants are three Years old, and always in dry Sunshiny Weather. The Leaves, thus gathered, are put into a Chinese Pan, made of cast Iron, clean, and red-hot, but placed obliquely, wherein they are stirred about, and shaken together, till they shrivel up, and are crisp; and then they are laid on Mats, and fan'd with Fans to cool them; and so put into Tubs or Canisters.

We have three Sorts of Tea; the Green, the Bohea, and the Imperial Tea; but all gathered from the same Kind of Plant, and only differing in the Age of the Leaves, the Time of gathering, or Way of curing.

The Liquor made of this Plant by Infusion in warm Water, though so much in Use at present, was hardly known an hundred Years ago, and hath not half so long been in much Use in *Europe*. It is extolled by some Persons as a Purifier of the Blood, promoting Digestion, strengthening the Head, provoking Urine, and preventing the Stone and Gout: The Bohea Tea is reckoned balsamic, analeptic, and accounted nourishing, and good for Consumptions; but either of them, drank in too great Quantity, are subject to bring on Tremblings, and hurt the Stomach. *Miller's Bot. Off.*

Tea is a Leaf brought from *China* and *Japan*, an excellent Account of which is given by *Kämpfer*, in his *Amœnitates Exoticæ*. The fresh Leaf is said to affect the Head, and to intoxicate, but it loses these Qualities when dried and prepared. The *Japaneſe* first bruise the dried Leaves in stone Mortars, and then throw a sufficient Quantity into boiling Water, and suffer it to infuse but a very little while. The greatest Advantage of Tea, considering the Quantity of it that is drank, seems to be, that it prevents the hot Water from relaxing the Stomach to too great a Degree, because it is a little astringent: All the other Effects of this fashionable Liquor seem to proceed from the hot Water. Tea boiled in Milk, in the Quantity of two Drams to a Pint, has been found to stop a Looseness, the Dose being repeated two or three times. Green Tea, being drank too freely, is prejudicial to weak Lungs. They who are subject to this Disease, ought therefore to chuse Bohea, and to mix Milk with it, in order to make it more laxative. *Geoffroy.*

There are six Sorts of Tea used in *England*: The first is called *Bohea*, which is a small blackish Leaf, which tinges the Water with a brown or redish Colour, and renders it of a Taste like an Infusion of *Sena*; the second Sort is called *Congo*; the third *Peco*; and the fourth *Green Tea*, and, by some, *Singlo*. This last is of two Kinds; one consists of an oblong narrow Leaf; the other has lesser Leaves, but both are equally good, and of a bluish-green Colour, seem very crisp when chewed, and tinge the Water with a Pale-green. The fifth Sort is called *Imperial Tea*; this has a large loose Leaf, whereas that of the other two last-mentioned is convolved, or shrivelled up; this Species is, also, most sightly to the Eye, of a green Colour, crisp in the Mouth, and of a pleasant Smell. The sixth Sort is call'd *Heysham Tea*.

All these Sorts of Tea are brought from *China*, and are supposed to be Leaves of the same Tree, and distinguished only by the Time of Gathering, and the Method of Preparation, or, as they call it, *Curing*. *Dale.*

The following Account is from *M. Wilhelm von Rhyn*, Physician to the Emperor of *Japan*:



# T H E

# T H E

The Virtues which the *Chinese* ascribe to Tea, are: That it purifies the Blood, prevents frightful Dreams, and defends the Brain from malignant Vapours; cures a Vertigo, and Pain of the Head, especially when it proceeds from a Crapula; is good for hydropic Persons, for it is a potent Diuretic; dries up Rheums of the Head; corrects the Acrimony of Humours; removes Obstructions of the Viscera; and restores a decayed Sight; for the *Japonefe*, I believe, make use of a Decoction of Tea, which they call *Tehia*, as their principal Antidote against a Weakness of the Eyes, contracted chiefly from the frequent and constant Use of hot Rice, and drinking their Liquor *Sargui*. It tempers adust Humours, corrects an hot Liver, mollifies an Hardness of the Spleen, and prevents Sleep, especially in those who are not accustomed to it. Moreover, it renders the Body brisk and lively, quickens the Senses, prevents a Torpor and Drowsiness, exhilarates the Heart, repels Fear, cures Gripes and Flatulences, discusses Wind in the Uterus, comforts and strengthens the Viscera, revives the Memory, sharpens the Wit, and tempers Bile. It is a noble Lithontriptic; at least I think I have Reason to say so, since I never found among the *Japonefe* the least Sign, or hear the least Complaint, of any Stone or Gravel in the Kidneys or Bladder, though I was diligent enough in my Inquiries about it; and, to say no more, it renders the nuptial Embraces more acceptable and endearing.

*Ettmuller* says, that Tea is a Specific for the Stomach, and not only corroborates that Part, but is a Preservative from the Stone and Gout, and is especially beneficial to the Head. It preserves from Drunkenness, prevents Drowsiness, and is particularly adapted to the Stomach.

That the Drinking of Tea is not so effectual in curing or preventing some Distempers in our *European* Countries, as in *China* and *Japan*, may reasonably be imputed to the constant Use of this Liquor, and the temperate Way of living in those Eastern Parts.

That a Tincture is extracted from the Leaves of Tea by means of hot Water, every body knows. That the drinking of this Liquor may be useful in some Cases, I shall not deny; but, that it is good for all, I cannot be persuaded to grant, since some of the good Effects, which are thought to proceed from Tea, are rather to be ascribed to the hot Water. That this Liquor has been pernicious in some Cases, has been often proved by Experience, of which the following is an Instance: A Woman of a sound and vigorous Constitution, but addicted to the Use of Tea, complained of a Concussion of her internal Parts from a kind of acrimonious Coldness, which molested her chiefly by Night, and which she thought was owing to Tea, because she was principally seized with this Disorder after a free Use of that Liquor. And I remember, that some Years ago a robust Man complained of the like acrimonious Coldness in the Abdomen, which he also imputed to the daily Use of Tea. *D. Hulse*, from *Muy's Podalirius redivivus, de Potu Theæ et Coffee*.

But what shall we judge of the Drinking of Tea and Coffee? When I was a Student at *Leyden* in *Holland*, I was miserably afflicted for a whole Year with the Headach; but after I began to drink freely of Tea, and especially of *Coffee*, every Day, I lived free not only from the Headach, but from all other Disorders; though before that time I had a lingering Life, more like Death, having conflicted with a long Series of Distempers for five Years past. *Ibid*.

I know some of my Acquaintance, who laboured under no small Inconvenience from the Stone and Gravel in the Kidneys, wholly freed from all painful Sensations of that kind by drinking plentifully of *Coffee*. *Ibid*.

Some who have travelled into those Eastern Parts, assure us, that Persons of Quality in *China* and *Japan*, boil the Buds and Flowers of the Tea, ascribing more Virtues to them, than to the Leaves. *Raii Hist. Plant. Sec PURPURA*.

**THECA**, *θήκη*, from *τίθημι*, to place; in general, is a Receptacle in which any thing is lodged; but is frequently appropriated to a Surgeon's Chest, wherein he keeps his *Apparatus* of Instruments, and other Necessaries. *Rhodi* attempts to prove from *Martial*, that *Theca* signifies, also, a Kind of *Fibula*, contrived not only for the sake of Chastity, but Modesty. *Castellus*.

**THEE**, the same as **THEA**.

**THEATRICOS**, *θητρικός*, from *θεάω*, to behold, sightly, entertaining to the Eye, is an Epithet applied by *Hippocrates*, *περὶ ὕπνης* to such Bandages, as are contrived more for Shew and Ornamentation, than real Use and Service.

**THEION**, *θεῖον*. The Divinity, or Divine Nature, the principal Cause, and prime Agent, in human Affairs, according to *Hippocrates*, in the Beginning of his Book *de Natura Muli*, *μάστιγα τὸ θεῖον ἐν τοῖσι ἀνθρώποισι δέσιον εἶναι*, "the Divinity is the chief Cause in Men [in human Affairs]". And, a little after, *δὲ δὲ τὸν ἐρῶντα ταῦτα χειρίζεται πρῶτον μὲν ἐκ τῶν θεῶν ἀρχιδαί*, "He who intends to manage these things aright, must take his Beginning from divine Things." *Τὸ θεῖον* signifies, also, any thing divine, which proceeds from God, or is incomprehensible, as God is, and the Cause of it beyond the Reach of Sense or Thought. This is the Meaning of *τὸ θεῖον* in

the Beginning of the Book *de Morbo Sacro*, and in many other Places. In the same Sense some understand the following Expression in the *Prognostics*, *ἐὰν τι θεῖον ἔσται ἐν τῇ νόσῳ*, "Whether there be any thing divine in Diseases;" but *Galen*, on the Place, after rejecting some other Interpretations, confidently asserts, that it means *τὴν τῷ περιέχοντι ἡμᾶς αἰετος καὶ δασυν*, "the Constitution of the Air which surrounds us;" which is the Cause of epidemic Diseases; or the Knowledge of the Stars, which conduces much to the Prediction of Diseases, and the Constitution of the Seasons throughout the Year. This Part of Physiology *Hippocrates* would have a Physician to be acquainted with, as we learn from the Books of the *Epidemics*, and the Book of *Air, Water, and Situations*. *Gorræus* and *Fernelius* understand by *τὸ θεῖον* such a Constitution of the Air, as offends more in Substance, than Qualities, which *Hippocrates*, *Lib. de Nat. Humana*, calls *νοσέειν σπύκνουν*, "a morbidic Secretion;" or, according to *Galen's* Exposition of *σπύκνουν*, by *ἀναθυμίασις*, a morbidic Evaporation, or Exhalation. *Gorræus. Poësius*.

**THEKA**, *H. M. Kyati seu Quercus Indica Bontii*, is a very tall and beautiful Tree of *Malabar*, with a very thick Trunk, covered with a thick, scabrous, and ash-coloured Bark, furnished with very numerous, green, geniculated, and quadrangular small Branches. The Wood is whitish, hard, smooth, striated, and not unlike that of the Oak. The Root is reddish, of an astringent and bitterish Taste, and has somewhat of an acid Smell. The Leaves adhere by Pairs to the Branches in parallel Order, and are oblong, round, acuminate, dense, thick, shining above, but not beneath, two Spans or more in Length, and a Span abroad, of an acid, and oftentimes austere Smell; rubbed together in the Hands, they yield a Gum, which immediately becomes of a black-purple Colour like Blood. The Flowers are small and sweet-scented, and are disposed about the tender Branches, at the Origin of the Leaves, in long, quadrangular, and sulcated Pedicles; and, gradually extending their Columns, are expanded in form of an Umbella. They consist of five or six roundish, white, and outwardly reflexed Petals, and are seated in a small and acuminate Calyx. Between the Petals stand a like Number of small white Stamina, with yellow Apices, the Middle being occupied by a greenish acuminate Pointal. At length appear large green Vessels, open above, in which are lodged, though separated from one another by a ligneous Partition, three or four roundish, green, lanuginous, and hairy Fruits, of a greenish Pulp, without Smell, and of a bitter and astringent Taste, inclosing a square Stone, of a white Colour inclining to red, and containing a small whitish Kernel.

Whole Woods of these large evergreen Trees are found in *Malabar*. The Pagans, from some unaccountable Superstition, use no Wood but this in building and repairing their Temples; of the tender Leaves they prepare a purple Colour, with which they dip their Silks and Cottons; they are, also, eaten as a Delicacy, and they boil them with Sugar into a Syrup, which cures the *Aphthæ*. Of the Flowers boiled with Honey they prepare a Medicine, which evacuates the Bodies of hydropic Persons of the Water: The Root dried, then pulverized, and exhibited, dissolves concremented Blood where-ever seated; and of the tender Fruits bruised is prepared an Ointment, which is very serviceable in curing an Herpes. *Raii Hist. Plant.*

**THELE**, *θήλη*. The Nipple of the Breast; or Breast:

**THELYGONOS**. A female Plant.

**THELYPTERIS**. Female Fern.

**THENAR**, *θίναρ*. The Palm of the Hand, or Sole of the Foot. But *Thenar* is the Name of a Muscle of the Hand, and another of the Foot.

The *Thenar* of the Hand is a very thick, fleshy Muscle, in some measure pyriform, lying on the first Phalanx of the Thumb, toward the Palm of the Hand, the large Eminence in which is principally formed by it. Its Name is taken from a Greek Word, which signifies *to strike*.

It is fixed to the Bone which supports the Thumb, and to the neighbouring Part of the great internal, annular, or transverse Ligament of the Carpus. It is, in some measure, bicipital, two distinct Portions answering to the two Insertions already mentioned. As it runs along the first Phalanx, these two Portions unite, and, diminishing in Thickness, are both inserted by one Tendon in the lateral internal Part of the Head of the first Phalanx, in the lateral Part of the Basis of the second, and in the lateral Ligament of that Joint.

The void Space between the two Portions of this Muscle gives Passage to the Tendon of the *Flexor Pollicis Longus*. That Portion, which lies nearest the Hollow of the Hand, is the largest; and its tendinous Extremity is inserted in the first sesamoid Bone, situated at the Basis of the second Phalanx.

The *Thenar*, by its Insertion in the first Phalanx of the Thumb, serves to draw it from the first Bone of the Metacarpus, more or less directly, as one of its Portions acts more than the other, or as they both act equally.

By the Insertion of the large Portion in the Basis of the second Phalanx, by the Intervention of the sesamoid Bone of the same Side, it may bend this Phalanx laterally on the first, and thereby bring the Thumb to a greater Distance from the Index.

Neither



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Neither does this Distance hinder it from sometimes bending, and sometimes extending the Thumb, in the ordinary manner.

When the small Portion acts alone, it may give the second Phalanx a small Degree of Rotation on the first, these two Bones not being articulated by a Ginglymus.

Near this is another Muscle, called, by *Winslow*, the *Mesothener*, which is a flat and nearly triangular Muscle lying between the first Phalanx of the Thumb, and the Bottom of the Palm of the Hand.

It is inserted by a very broad Basis in the Ligament which connects the Os Magnum of the Carpus to that which supports the Thumb: It is, also, inserted along the internal or angular Part of that Bone of the Metacarpus, which supports the middle Finger, and in the small Extremity of that which answers to the Index.

From thence the Fibres contracting to an Angle, terminate in a flat Tendon of different Breadths, which is inserted in that Side of the Head of the first Phalanx of the Thumb, which is turned to the Hollow of the Hand, and in the neighbouring Part of the Basis of the second Phalanx, by means of the second sesamoide Bone belonging to that Joint.

The *Mesothener* moves the first Phalanx of the Thumb towards the Hollow of the Hand, more or less obliquely, as it acts either alone, or with the large Portion of the *Thenar*, or even with the *Antithenar*. By its Insertion in the sesamoide Bone of the second Phalanx, it, likewise, moves that Phalanx on the first, and thereby assists the *Flexor Longus*.

The *Thenar* of the Foot is a Muscle made up of several Portions, and lies on the inner Edge of the Sole of the Foot.

It is fixed, by three or four fleshy Fasciculi, to the lower and inner Part of the Os Calcis, Os Scaphoides, and Os Cuneiforme majus. It is, also, fixed a little in the annular Ligament under the inner Ankle, which belongs to the Tendon of the *Flexor Longus*.

From all these different Insertions the fleshy Fasciculi approach each other, as they advance forwards under the first Bone of the Metatarsus; and are fixed partly in the internal sesamoide Bone, and partly in the Inside of the first Phalanx near its Basis.

There is another Fasciculus fixed by one End to the Os Scaphoides and Os Cuneiforme majus, and by the other to the external sesamoide Bone, and Outside of the first Phalanx of the great Toe.

The *Thenar* bends the first Phalanx of the great Toe. When the Portion nearest the inner Edge of the Foot either acts alone, or acts more than the rest, the great Toe is separated from the other Toes, especially if it be at the same time extended. This Separation may be greater or less, according to the Degrees of Action of the other Portions of the *Thenar*. *Winslow's Anatomy*.

**THEODORETOS**, Θεοδώρητος. The Name of an Antidote described by *Paulus Aegineta*, L. 7. C. 11. and by many other medicinal Authors. The principal Ingredient is *Anacardium*; and it is intended for strengthening the Memory. The Word imports *divine*.

**THEODORICON**. This Word, like the preceding, imports *divine*; and is used as an Epithet for many Compositions, two of which occur in *Mesue*.

**THEODOTIA**, Θεοδότης. The Name of several Collyria described by *Galen*, *Aetius*, and *Paulus Aegineta*.

**THEOPEMPTOS**. Sent from God. This is a pompous Title for an Antidote, or Tincture of Antimony, made with Antimony and Gold, and described by *Schroder*, L. 3. C. 17.

**THEOPHILION**, Θεοφιλιον. The Name of a Collyrium described by *Aetius*.

**THEOPHRASTICI**. A Name for the Disciples or Followers of *Theophrastus Paracelsus*.

**THEORIA**, from θεωρεῖν, to contemplate. The contemplative, or speculative Part of Medicine. See the PREFACE. The wild Imaginations of the Whimsical and Conceited have in all Ages suggested, and still continue to suggest, innumerable Theories of Physic, highly detrimental to the Art of Healing, of which a thousand Instances might be given. Thus *Hippocrates* directs Bleeding under the Tongue in a Quinsy; but *Celsus Aurelianus* condemns this Practice, without consulting Experience, the only Test; because it is not consistent with his favourite Theory.

**THEOXENI MALAGMA**. The Name of a Malagma against Pains of the Feet, described by *Celsus*, L. 5. C. 18.

**THERÆUS**, Θερᾶιος. An Epithet for a Species of Cretan Wine, mentioned by *Galen*, which was sweet, black, and thick, but not astringent.

**THERAPEIA**, Θεραπεία, from θεραπεύω, to heal, or cure, according to *Galen's* Definition, *Com. 1. in R. V. I. A.* is ἡ τῶν νοσημάτων ἀναίρεσις ἢ δι' ὑγιαντικῶν, ἢ γυναικῶν ἢ, that is to say a Removal of Diseases already done, or completed, not what is still in its Progress. It is usually distinguished into perfect and palliative; the first is when the Disease is totally subdued; the other, when the Symptoms are only mitigated.

**THERAPEUTICE**, Θεραπευτική, is that Part of Medicine, which is particularly concerned in the Cure of Diseases.

**THERENIABIN**, Tereniabin. Oriental Manna, called also by the Greek Names *Drosomeli* and *Abromeli*.

# T H E

**THERIACA**, Θηριακά, from θήρ, a wild Beast, are properly such Medicines as cure the Bites of venomous Animals; and are supposed to differ from *Alexipharmics*, in that these latter are a Remedy for Poisons, which are taken inwardly; the other for such as affect the internal Parts from the Bites of Animals, as appears from *Nicander*, who has very elegantly treated of both, in two Books in heroic Verse. But he seems to make two Sorts of *Theriaca*; one by which the Bites of Animals are prevented, either by way of Suffumigation, or by rubbing or covering the Parts exposed; the other, by which the Bite itself is cured, and rendered of no ill Consequence. These Remedies are called *θηριακά ἀπὸ τῶν θηρίων*, from wild and venomous Animals, and not from any particular Species of them; tho' the Viper, which is properly called *ἐχίδνα*, (*Echidna*), or *ἐχίς*, (*Echis*), is by the Greeks called *θηρίον*, (*Iberion*) by Way of Eminence; as the Lion, also, is sometimes called *θήρ*, (*Ther*).

**THERIACE**, Θηριακή, is an Antidote effectual against all Sorts of Poisons; and tho' every thing endued with this Property may be called by this Name, since *Galen* calls *Garlick* the Countryman's *Theriace*, yet it is principally given to that most celebrated Medicine, composed of a Multitude of Simples with the Flesh of Vipers, and of Efficacy against all Manner of Poison convey'd into the Body, whether from a Bite, or through the Mouth. For the Antients often meeting with Poisons, and finding it no easy Matter to avoid either the Bites of Serpents, or a treacherous and poisonous Draught; and also considering that the Natures of Men were so different from one another, that what was good for one Man was oftentimes of no Use to another, they set themselves to invent some manifold and exquisitely compounded Medicine, which should be an universal and present Remedy in all Cases where Poison was concerned, and such was what we commonly call *Theriace*. The Invention of this Medicine is not very antient; but about the Time of *Nero*, when *Andromachus*, a very celebrated Physician, while the Professors of Medicine were consulting with one another, how to render this Antidote the most speedy as well as effectual, first thought upon adding Viper's Flesh. The Composition of the *Theriaca*, therefore, which bears the Name of *Andromachus*, is very antient, and in *Galen's* Opinion very good. This *Theriaca* is described by *Andromachus* himself, in some Verses dedicated to *Nero*, and inserted by *Galen*, in his Treatise *de Theriaca ad Pisonem*. [See the Description under the Article *ANDROMACHUS*]. To this Antidote *Andromachus* did not give the Name of *θηριακή* but *γαλήνη*, (*Galene*), that is, *Sereneness*; he also called *ἡλάρη*, (*Hilare*), and *εὐδίας*, (*Eudias*), Words importing Cheerfulness and Serenity of Mind; but *Crito*, and others after him, gave it the Name *θηριακή*, on account of the Viper's Flesh which entered its Composition. In Imitation hereof several other Physicians composed Antidotes against Poisons, which they, also, called *θηριακά*, an Account of which you have, as here follows, under the Names of their Authors, or some noble and illustrious Persons.

Θηριακή Αἰλίου Γάλλου, "the *Theriaca* of *Aelius Gallus*," which he is said, after his Return from *Arabia*, to have presented to *Cesar* with this Recommendation, that it had saved the Lives of many Persons under him. It is as follows: Take of the Root of the white Vine, sixteen Drams; Seeds of Trefoil, *Opopanax*, each eight Drams, *Aristolochia Tenuis* twelve Drams; Root of *Libanotis*, *Iris Illyrica*, *Ginger*, *Opium*, each eight Drams; Seeds of wild Rue, twelve Drams; of *Ethiopian Cumin*, sixteen Drams; of *Myrrh*, *Casia*, *Castor*, *Seseli*, *Eringo-root*, *Serpyllum*, *Succus Cyrenaeicus*, each six Drams; of *Medica*, twelve Drams; *Sagapenum*, six Drams; *Saffron*, five Drams; Meal of *Ervum*, twenty-four Drams: Make them with Water into Troches of the Weight of three Oboli, and exhibit them in Wine.

Θηριακή Αντίοχου Φιλομήτορος, "the *Theriaca* of *Antiochus Philometor*," is thus prepared: Take of the Roots of *Meum*, *Serpyllum*, *Opopanax*, each two Drams; Seeds of Trefoil, one Dram; Seeds of *Anise*, *Fennel*, *Ammi*, *Apium*, each one *Acetabulum*; very fine Flower of *Ervum*, two *Acetabula*; old Wine, as much as is sufficient to mix them together, in order to make Troches to be dry'd in the Shade. The Dose is three Oboli in three Cyathi of Wine. *Eudemus* gives us the Composition in Verse, as we have it in *Galen*, Lib. 2. de Antidotis.

Θηριακή Δημοκράτους, "the *Theriaca* of *Democrates*," who was an excellent Physician, and describ'd his *Theriaca* in Iambic Verses, recorded by *Galen*, Lib. 1. de Antid. It contains the same Simples as the *Theriaca Andromachi*, but differs in the Weights; for of these, where *Andromachus* directs four Drams, he orders but two; and where *Andromachus* takes two Drams, he directs four; as may be observ'd in many of the Simples which enter that Composition. You have this *Theriaca* in *Aetius*, *Tetrabib. 4. Serm. 3.*

Θηριακή Δημήτριου, "the *Theriaca* of *Demetrius*." This Author was chief Physician to the Emperor in the Time of *Galen*; and in the Composition of his *Theriaca* agreed with *Andromachus*, except in the Weight of the Troches of Squils, which has but an inconsiderable Difference; for whereas *Andromachus* prescribes forty-eight Drams of those Troches, he directs but forty-six in the Composition of the *Theriaca*.

Θηριακή Ευκλείδους, "the *Theriaca* of *Euchid*," surnamed *Palatanius*, which was thus prepared. Take of *Castor*, six Drams; *Op-*



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Opopanax, Sagapenum, Sefeli, Cachrys, Chamædrys, Chamæpitys, Marrubium, each sixteen Drams; Styrax, Bitumen Judaicum, Myrrh, each seven Drams; Juice of Poppy, eight Drams; Honey, one Pound. It is given in the Juice of the Fraxinus, or in Wine, to the Quantity of a Dram, or more, at Discretion; it is good, also, in Quartan Fevers.

Θηριακὴ Ζήνωνος, "the Theriaca of Zenon" of Laodicea: It contains of Cardamoms husked, Serpyllum, Seeds of Apium, Root of the white Vine, the Seeds of Trefoil, Anise, Parsley, the Root and Seeds of Fennel, Ammi, Aristolochia tenuis, Meal of Ervum, Opopanax, of each an equal Weight: Bruise each of them separately; then mix them together, and work them up in Wine into Troches, to be dry'd in the Shade.

Θηριακὴ Μιθριδάτης, "the Theriaca of Mithridates." This Antidote is otherwise called Μιθριδάτης, "Mithridate," because King Mithridates always used it, to preserve himself against Poison; and that so effectually, that when he was besieged by the Romans, and had twice attempted in vain to poison himself, he was obliged to fall upon his Sword, and thus dispatch'd himself. It consists of a great Number of Simples, and is described by Galen, Lib. 2. de Antid. [See the Preparation under MITHRIDATIUM]. This Theriaca is the same which Aetius unaccountably describes for the Theriaca Andromachi.

Θηριακοὶ ἅλας, Theriaci Sales, Theriacal Salts, are prepared of Vipers in the following manner: They put four Vipers alive into an earthen Pot, which has its Outside well cover'd with Clay, and upon them they cast an Italic Modius, that is, twenty Pounds of Sal Ammoniac, or common Salt, to which they add Troches prepared in the following manner: Take of Gentian-root, one Pound; Tops of the lesser Centaury, Marrubium, each six Ounces; Mountain Scordium, Apium, Chamædrys, Seeds of Garden-rue, each one Pound: Bruise them, and make them up with Attic Honey into Troches, half a Pound of which is to be put into the Pot with the Viper, and the rest is to be mixed with the Salt, together with five tender and fresh Squils cut very small. This done, they put Fire under the Pot, which is to have four or five Perforations in the Cover, through which the exhaling Vapour, when it appears no longer gross and foul, but like a thin and pure Flame, shews the Burning is completed. Martianus, besides the Pastils, adds another Italic Modius of Salt. The Pot, being taken from the Fire, is suffer'd to cool for a Day and a Night; then they open it, and, taking out the burnt Contents, carefully triturate them, and put them into a Sieve with the following Mixture: Take of Seeds of wild Rue, Hyssop, each nine Ounces; Fennel-Seeds, Gallic Nard, Stachys, each six Ounces; Macedonian Parsley, four Ounces; the Tops of Origanum and Thyme, each nine Ounces; the Berries of Amomum, and the Seeds of Horminum roasted, each three Ounces; Juniper-berries, black and white Pepper, each two Pounds; the Root of Laserpitium, ten Ounces; the Seed of Coriander, Ginger, the Seed or Root of Stryrion, Penyroyal, Sefeli, Mountain Tordyllium, Mint, each six Ounces; Cassia Pistula, two Ounces, Cinamon, one Ounce: Bruise them, and mix them all together with the rest; and, having passed them through a Sieve, let them aside in glass Vessels in a dry Place, and use them not till the End of forty Days. I, says Galen, Lib. ad Pisonem, burn not the Vipers, but take as many Theatrical Troches, as contain four Vipers; that is, says Martianus, about two Ounces and an half of dry Troches; and mix with those Things which are burnt with the Vipers, that they may lose the Bitterness, with which they are endu'd, in the Burning; and by this Method prepare the best of Theriacal Salts. These Salts are highly efficacious in cutaneous Diseases, as the Leuce, Lepra, Impetigo, and Phthiriasis, provoking a copious Sweat, by which means the excrementious and morbid Juices latent under the Skin are expelled.

These Theriacal Salts are described by Galen, Lib. de Theriaca ad Pisonem; but the Reader is to take notice, that the Copy of Galen is very much corrupted in this Place; but, may however, be corrected from Aetius, Tetrab. 4. Serm. 1. Cap. 97. by Help of which we may, also, restore Paulus, who describes these Salts at the End of his seventh Book.

Θηριακοὶ ἀπὸ τῶν ἰσχυρῶν, "Theriacal Pastils, or Troches". These are Troches prepared of the Flesh of Vipers for the Composition of the Theriaca, and are made in the following manner: They take female Vipers caught in the End of the Spring, take off their Skins, and carefully cleanse them; then, after giving the Flesh two or three Washings in Water, they put it in a clean Pot with a sufficient Quantity of Water, and boil it over a Fire made of the Wood of the Vine, till the Flesh be wholly separated from the Spine. Afterwards they carefully press the Flesh with their Hands, and pound it very well in a Mortar, instilling every now-and-then some of the Broth. This done, they take of the finest Bread, new, dry, pounded, and sifted, three Parts for one-fourth, or at least four Parts for one-fifth of the Flesh; and pound them very carefully together, instilling at proper Intervals some of the Broth, till they are exactly united. Of this Mass they form fine Troches of a moderate Size, adding a little Opobalsamum in the Formation, and dry them in the Shade. They are then rubbed over with the best

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Opobalsamum, and kept in a glass-Vessel; and if at any time there appear about them any Dustiness, or Whiteness, on account of Mouldiness, it is carefully wiped off with a Linen Cloth.

Θηριακὴ, Theriaca, is, also, the Name of a Plaister of Centaury commended by Oribasius for Wounds and Punctures of the Nerves and Muscles; and for the Bites of wild Beasts, and a mad Dog: It is described by Aetius, Tetrabib. 4. Serm. 3.

## THERIACA ANDROMACHI.

THE TREACLE OF ANDROMACHUS, commonly called VENICE TREACLE. See ANDROMACHUS.

## THERIACA COELESTIS.

Take of the Theriaca Benedicte of Quercetan, a Preparation not much different from Venice Treacle, a Pound and an half. Extract with Treacle-water; pour the Whole into another Vessel; and abstract to the Consistence of Honey. Then, keeping the Essence separate, pour the abstracted Spirit to what before remain'd in the Vessel. Then extract and pour off a second time. To what remains pour a sufficient Quantity of rectified Spirit of Wine, and extract its remaining Essence, then decant again, and mix this Essence with the former. Then extract what still remains in Treacle-water, and at last in distil'd Vinegar, fortified with Spirit of Nitre: With these last Extracts precipitate the former, and coagulate the former to the Consistence of Honey. Then mix with the Whole, of the Magisteries of Coral and Pearls, each one Ounce; of the Magisteries of Iacinth, Rubies and Emeralds, each six Drams; of Animal and Mineral Bezoar, and Salts of Coral and Pearls, each half an Ounce; of oriental Bezoar, Seal'd Earth, true Unicorn, and of the Bone of a Stag's Hart, each three Drams; of Ambergrise, two Drams; inspissated in a double Vessel to the Consistence of an Extract, or a Mass fit for Pills. Schroder.

## THERIACA DIATESSERON:

An Electuary of four Ingredients.

See DIATESSERON. The THERIACA PAUPERUM is the same.

## THERIACA EDINENSIS:

The Edinburgh Treacle.

Take the Roots of Angelica, Contrayerva, Masterwort, Virginian Snakeroot, wild Valerian, Zedoary, and Bayberries, of each two Ounces; the Leaves of Rue, and Scordium, of each an Ounce and an half; of the Powder of Diambra, three Ounces; Camphire, Saffron, Rosin of Guaiacum, Myrrh, and Opium, each an Ounce; clarified Honey, thrice the Weight of the Powders; and as much Canary-wine as will serve to dissolve the Opium: Mix all together, and make it into an Electuary, according to the Rules of Art. Edinburgh Dispensatory.

## THERIACA GERMANORUM.

The Rob made of the expressed Juice of green Juniper-berries is so called.

## THERIACA LONDINENSIS:

London Treacle.

Take of the Four greater and lesser hot Seeds, each an Ounce; of the Roots of Angelica, Virginian Snakeroot, Tormentil, Elecampane, Zedoary, Contrayerva, Calamus Aromaticus, and Gentian, each two Drams; the Leaves of Cress Dittany, Scordium, Rue, Laurel, and Juniper-berries, each half an Ounce; Nutmegs, Mace, Saffron, Myrrh, and Cloves, each three Drams; Ginger and Opium, each two Drams; Syrup of white Poppies, boiled to an higher Consistence than ordinary, three times as much as the Weight of the rest; and of Canary a sufficient Quantity to make the Whole into an Electuary.

This is much altered from what has been in all the preceding Dispensatories; and as an Alexipharmic, which is plainly its main Intention, much for the better; for many Ingredients, very weakly conducive to such an End, are now rejected; and one of the most efficacious we have in the Shops, of that Class, added, which is the Contrayerva; but, as this has hitherto been mostly used by the Surgeons, where warm Cataplasms are required, how far it is improved for such Purposes, and especially by the Exchange of Honey for Symplicum de Meconio, I will not pretend to be a Judge.

Quercetan ascribes surprising Virtues to this Preparation, in subduing Poisons, and contagious Disorders; in allaying Com-motions of the Spirits and Humours; in mitigating Catarrhs,



Pains, and Watchings; in corroborating the natural Balsam, and preventing Putrefaction. *Schrod. Pharmacop.*

THERINOS, *θήρινος*, is an Epithet apply'd to a sort of Wine, which was moderately thick and black, and of the Growth of Asia. *Galen, Lib. περὶ ἐνχυμάτων.* *Θέρινος* is an Epithet of a Collyrium in the same Author, *Lib. 4. de C. M. S. L. Cap. 7.*

THERIODES, *θηριώδης*, from *θηρ*, Fera, a wild Beast; wild, savage, is applied to Things of a ferine or malignant Nature, and particularly to Diseases which take their Names from wild Beasts, as the Elephas, and Cancer, or under which Animals, as large Worms, or Ascarides, are generated; or even to a Phthisis, under which the Nails are incurvated, like the Talons of wild Beasts. *Hippocrates* applies it, also, to the Autumn, as being the Season of the Year, in which malignant and destructive Distempers are most predominant. Thus *Galen*, commenting on τὸ *θηριώδες φθινόπωρον*, 6 *Epid. Sect. 1. Aph. 13.* says, that whether the Author, by τὸ *θηριώδες* of the Autumn, means the large Worms or Ascarides; or the Elephas or Cancer, or, as some will have it, a Phthisis, all those Disorders are chiefly generated in the Autumn. *Θηριώδες* may be apply'd to the Autumn on account, also, of those ferine and melancholy Disorders proceeding from black and highly adust and torrefy'd Bile, under which the Patients fall upon every one they meet, and attempt to worry them after the manner of wild Beasts. *Galen*, in his *Exegetis*, expounds the τὸ *θηριώδες*, of Animals, such as the large Worms, or Ascarides, in the Intestines; or by τὸ *φθινόπωδες*, "rabific," because the Autumn is a Season disposed, from the Corruption of the Humours, for the Generation of many severe and dangerous Disorders, which often terminate in Contumptions; which are, also, very mortal in Autumn. *Arctaus*, also, who almost equal'd *Hippocrates*, in Grandeur of Style, bestows the same Epithet *θηριώδες* on the Autumn. And *Erotian*, expounding the τὸ *θηριώδες*, 6 *Epid.* before-mention'd, tells us that some understand by it malignant Ulcers, called *θηριώματα* (*Theriomata*) which are most rife in Autumn, because of the Inequality of the Air; others refer it to small Worms, which are then principally generated; and others will have it meant, of a Phthisis.

*Θηριώδης βήξ*, 6 *Epid. Sect. 2. Aph. 11.* a ferine and malignant Cough, is explained by some Interpreters, as *Galen* tells us, by a dry Cough excited by Worms creeping upwards to the Mouth of the Stomach, and lancing the same; others, he says, accommodate the Expression to the Cough of those in a Phthisis, because their Nails are incurvated, as was said before. Others, again, expound *θηριώδης* by *κακοήδης* (*Cacorhes*) malignant, which is the Opinion of *Galen* himself; so that *θηριώδης βήξ* is a malignant and pernicious Cough, which is no Indication of an Abscess, nor gives any Hopes of a Concoction. The same Author, in his Comment on 6 *Epid. Sect. 2. Aph. 16.* where *Hippocrates* speaks of such dry Coughs in a burning Fever, as are not very troublesome, nor excite a Thirst, nor dry the Tongue, because they are owing, he says, ὅτι τῷ *θηριώδει*, ἀλλὰ τῷ πνεύματι, "not to any (thing expressed by) *Theriodes*, but "to the Wind (or Air)," as appears in that the Patient never coughs, but when he speaks, or his Mouth is open, explains the τὸ *θηριώδες* as follows: *γινόμενων δὲ βηχῶν ξηρῶν καὶ διὰ τινὰ κακοήθειαν τὸ νοσήμαλος*, &c. "Since dry Coughs proceed, "also, from some Malignity of the Disease, in order to distinguish them from those of which he is now speaking, he says, that these latter are not excited by any thing signify'd by *Theriodes*, but by the Air. Some will have it, that by *θηριώδης* here *Hippocrates* does not mean simply all Malignity in general, but, as some of them interpret it, a Phthisis, "because the Patients under that Disease resemble Beasts in respect of the Crookedness of their Nails; others understand it of a *Therionia*, which is properly an Ulcer of the Lungs; others, again, will have it spoken with respect to Worms, ascending into the Mouth of the Stomach, and by Irritation of that Part provoking a Cough; though they can neither prove this by Reason nor Experience. The best way, therefore, is to understand *Theriodes* of some Malignancy, whether the Cough, arises from some Defluxion from the Head, or an Ulcer in any of the Organs of Respiration, or an Abscess in those Parts, or what they call an Empyema. Now there are other kinds of Coughs besides this, which are not malignant, and are owing to a Distemper of the Organs of Respiration, or of the Fauces, or of the Aspera Arteria, or to exasperating Meats and Drinks, and even sometimes to the ambient Air." In the like Sense, by *θηριώδης τὰ ἐμύματα* (*Theriodeta Emumena*) *Coac. 623.* we are to understand malignant Vomitings, by which the great Corruption and Malignancy of the Humours are indicated; or by which, perhaps, Worms are, also, ejected.

*Θηριώδης παρακρίσις* (*Theriodeta Paracrisis*) in *Hippocrates*, 1 *Prorrhet. 26.* and *Coac. 85. 55.* are Disorders of the Brain from Deliriousness, or Loss of Reason; wherein the Patients behave like wild Beasts, or, as *Galen* says, *Com. 1. in Prorrhet.* kick, bite, and rage at those who come near them, as if they were their mortal Enemies. Also, *θηριώδης παρακρίσις*, (*Theriodeta Paracrisis*) 1 *Prorrhet. 123.* import a ferine and savage Madness, more vehement than Melancholy, and very malignant

[see DELIRIUM]: Or, as *Galen* explains it, "by this Expression "is to be understood an Epitasis (Intenseness) of the melancholy "Disorder; for as they who are melancholy, and highly delirious, are prone to do those who stand near them a Mischief, so, when they are mischievous and raging beyond measure, he gives the Disorder the Name of *Theriodes*."

*Θηριώδης διαίτη* (*Theriodeta Dieta*) is such Diet as is common to Men with Brutes, and such as was used in the first Ages, *Lib. περὶ ἀρχαίων ἰσχυρίων.*

*Θηριώδεις* (*Theriodes*) are Patients molested with Worms; or such Fevers as by a peculiar Malignity and Depravation of the Humours, which naturally happens in Autumn, afford Matter for the Generation of Worms. Thus, 4 *Epid. Θηριώδεις ἐν τῇσι κρίσεσι* are those who conflict with Worms about the Time of a Crisis; or those who, labouring under a Fever, towards the time of its Decline and Solution, discharged Worms or Ascarides by Stool or Vomit, by the Benefit of Nature, making Efforts to free itself from whatever offended or opposed it.

THERIOMA, *θηρίωμα*. See the preceding Word.

THERION, *θηρίον*, in *Hesychius*, is pounded πᾶθος τι σώματος, a kind of bodily Disease; which is, as *Galen* in his *Exegetis* expounds it, either Worms, or a ferine (ἀγέρον) Ulcer; as it signifies, he says, in the Book *de Locis ad Hom.* where you read, *θηρίον ἐπὶ τὸ σῶμα ἐπέχεται*, "a ferine (or malignant) Ulcer "arises on the Body." It has the same Signification. *Coac. 467.*

THERIOTOME, from *θηρίον*, a wild Beast, and τέμνω, to cut, or dissect. The Anatomy of Brutes.

THERMÆ. Natural warm Springs, of which the celebrated *Frederic Hoffman*, in his Dissertation on the *Caroline Waters*, has given us the following Account.

Nothing has more perplex'd the Minds of Men, and laid a more effectual Foundation for different Opinions among Physicians, than that actual and continual Heat, which in some Medicinal Springs is obvious to the Senses. We shall not enumerate all these Opinions, but only specify some of the most considerable: Many, therefore, especially among the Antients, accounted for the continual Heat of these Waters from the Platonic *Barathrum* and Centre of the Earth, where they suppos'd a perpetual Fire lodg'd, and thence diffus'd thro' Chinks and Apertures to particular Parts. But this Notion is rather the Creature of a wanton Fancy, than a Theory capable of being supported by solid Arguments. Others have accounted for the Heat of such Springs, from that of the Sun. But the Rays of the Sun do not penetrate into the Bowels of the Earth; and these Waters always retain the same Heat, when the Sun has retir'd from our Hemisphere, where he shines faintly in the Winter, and when the Earth is constricted and harden'd by Frost. Nor, if the Heat of these Waters was produc'd by the Influence of the Sun, could any Reason be assign'd, why other Springs, equally expos'd to the Solar Rays, should not be, also, hot.

Some Chymists derive the Origin of the Heat in these Waters, from the Effervescence of an Acid and an Alkali, as, also, from a Congress of Quick-lime with the Water. But if the Heat of these Waters was produc'd by the Conflict of an Acid and an Alkali, a neutral Salt, which is always produc'd by a Mixture of these, must necessarily be found in the hot Springs; which, however, does not happen. And there are Limestone Mountains in the Earth, yet the Matter of them conveys no Heat to the Waters, till it is previously burn'd; but Quick-lime is rarely found in the Bowels of the Earth. Others think they embrace a more rational Opinion, when they assert, that in the Production of the Universe, these Waters were furnish'd with their Heat: But this Notion seems to be as repugnant to Truth as the others; for, if this Heat was innate, I do not see why it should be so soon lost: So that we may conclude, that this Heat depends upon the Communication and Access of an igneous Substance, in the same manner as Water is heated by the Fire, and becomes cold when remov'd from it.

'Tis not, therefore, to be doubted, but that these Waters, naturally cold, contract their Heat in the Bowels of the Earth thro' which they pass; so far is the Earth from being render'd warm by the Heat of the Waters. As Water out of the Earth is render'd hot by Fire, so in the Bowels of the Earth a latent Fire renders the Waters flowing by it tepid or hot. That the Existence of such Fire is not precariously asserted, but that it is really lodg'd in the Meanders of the Earth, is sufficiently certain, from the burning Mountains found in different Countries, the violent subterraneous Commotions and Thunders, the Eruptions of Flames, and the burning of Rocks and Mountains. We must, therefore, inquire, by what means this subterraneous Fire is generated in the Bowels of the Earth; and how it is so long, and so constantly supported and maintain'd.

In order, therefore, to explain this difficult Phenomenon, we must, from the Principles of Natural Philosophy and Chymistry, account for the Origin of Fire, and the Production of Flames. We, therefore, affirm, that the Matter, Matrix, or Food of Fire is supplied by pinguis and sulphureous Substances. These not only give Origin to Flames, but are, also, quickly carried into



into an igneous Motion. Sulphurs are converted into Fire, by their highly accelerated and quick intestine Motion; so that Fire is only a Species of brisk intestine Motion, which destroys the Union and Mixture of Bodies. Hence, the Person who from cold Bodies attempts to produce Fire and Flame, must take sulphureous Substances, and by a violent Attrition and Collision put them into a brisk igneous Commotion.

Thus, for Instance, Iron is a very sulphureous Metal; and for that Reason, of all other Metals, the most susceptible of Heat. Hence, when it stands in Fusion, it throws off numberless Sparks; and its Filings, when blown into the Flame of a Candle, forthwith diffuse lucid Sparkles. This Sulphur of Iron, by Collision, put into an accelerated Motion, produces manifest and visible Fire. Hence it is that a Piece of Iron, by a quick and repeated Percussion with a Hammer, appears igneous, and is rendered so hot, as to burn and kindle Sulphur. This Origin of Heat and Fire is sufficiently proved by that curious Experiment, in which, the most lucid Flame is in a Moment produced, by duly mixing highly concentrated fuming Spirit of Nitre with Oil of Cloves; for this Oil, which is replete with a large Quantity of thick Sulphur, is, by an Admixture of this Spirit, thrown into a brisk intestine Agitation and Motion, which is Fire.

When, therefore, it is asked, What is the first Origin of subterraneous Fire, and by what it is supported? I think we may assert, that these Things happen, because the sulphureous Substances, lodged in the Bowels of the Earth, being by their mutual Action put into a violent Motion, first produce Fire, which afterwards easily diffuses and propagates itself, by means of the adjacent sulphureous, and, especially, the bituminous and easily inflammable Materials. We must, also, inquire, what Substances, hid in the Bosom of the Earth, are fit for taking Fire; and these, in my Opinion, are principally iron and sulphureous Ores. For that large Tracts of Ground are full of iron Ore, is sufficiently certain; nor is it less true, that profound subterraneous Caverns abound with sulphureous and vitriolic Ores; as is obvious from the digging Sulphur and Vitriol, almost for a thousand Years past, from mount *Ramelsburgh* near *Goslar*.

Some Parts of *Italy*, also, abound with Sulphur; which is the principal Cause of the burning Mountains, and frequent Earthquakes in that Country. Hence, *Tschirnhausen*, in *Lib. de Medicamentis*, tells us, that in Mount *Ætna* in *Sicily*, and Mount *Vesuvius* in *Campania*, he principally observed four Things: First, common inflammable Sulphur: Secondly, a porous Earth: Thirdly, Air: And fourthly, Sea-Water; for the Sulphur kindled in these Mountains, not only produces these terrible Eruptions, but also by heating the Earth intensely, renders the Waters, which flow thorough them, warm.

This is, also, the Reason, why in *Italy*, where the Sulphur burns in the subterraneous Spaces, hot Springs are so numerous. Thus, *Laurentius Grullus*, in *Orat. de Peregrinat. Studii Medicinal. ergo suscepta*, tells us, that in *Siena* there are above fifteen medicinal Springs; and, a little after, he speaks in the following manner: "Afterwards, at *Puzzolo*, I saw whole Mountains of native Sulphur, which is much esteemed in the Shops; these were formerly called the *Phlegrean* Mountains. Near *Baia*, I, also, saw various Mixtures of hot mineral Waters; and in the Bay of *Naples*, near the Lake *Avernus*, the Vapours arising from the Earth almost surpass the Virtues of the hot Springs." There is, also, found a Sulphur of the same Kind, in some of the hot Springs of *Germany*, especially those of *Aix la Chapelle*, which not only tinge Silver with a brownish Colour, but, also, in the *Cæsarean* Bath produce a pure Sulphur in the Form of Flowers.

We have already shewn that Sulphur is the Matter, as of all Fire, so, also, of that which is lodged in the Bowels of the Earth. But in what manner this Sulphur should be spontaneously kindled, and take Fire, is not as yet explained. In my Opinion, therefore, this happens by the mutual Congress, and violent intestine Motions, of the sulphureous Bodies, when the disengaged Sulphur acts upon chalybeate Earths and Substances, or upon a bituminous Earth. We may, therefore, conceive the Thing to happen in the following manner: When, in the Bowels of the Earth, Sulphur is mixed with Bitumen, or a Fossile abounding with an acid Salt, as, also, with chalybeate and sulphureous vitriolic Marcasites, when these are collected in large Quantities, and when the Water approaches them, then the Acid of the Vitriol contained in the Sulphur is dissolv'd, and by its Action on the bituminous Earth, and the sulphureous chalybeate Ores, not only excites an intense Heat, but, also, if the Earth is porous, and a free Access afforded to the Air, produces a bright Flame.

This Doctrine will be further Illustrated by the following chymical Experiment: When one Pound of native Sulphur, reduced to a Powder, is mixed with an equal Quantity of the fine Filings of Iron, and put into a Glass, sprinkling as much Water as will render the Mixture moist, like a Poultice; this Mass after twelve Hours, is raised in a Froth, and such an hot internal Conflict is produced, that the Glass is broken by the Heat, whilst the Colour of the Mass, which was before yellow, degenerates into black; this Magma, when taken out of the Glass, broken into small Pieces, laid in a Heap, and for a short time exposed to the free Air, not only becomes more intensely hot than before,

but, also, produces a manifest Flame, attended with a sulphureous Smoak.

The Origin of subterraneous Fire, may be farther illustrated by a common Experiment, by which it is shewn, that the Marcasites, and sulphureous Portions of Earth, of which Vitriol is made, when exposed to a moist and rainy Air, soon conceive an intense Heat. The same happens when the Fragments of the black Caput Mortuum, remaining after the Sublimation of Sulphur, from sulphureous Marcasites, are laid in a Heap, and exposed to a moist Air; for on this Occasion, they contract so violent an Heat, that the Hand cannot be put near them, without the Danger of being burnt. This is sufficiently obvious to the Senses, at *Alt-Sattel*, a Town in *Bohemia*, a Mile distant from the *Caroline* Springs, where Allum, Sulphur, and Vitriol, are prepared.

The Origin, and true Cause, of subterraneous Fires, is still further illustrated by a remarkable Phenomenon, daily observable in those Places, where Alum is prepared; such as *Diehen* in the Marquisate of *Meissen*, and *Commoden* in *Bohemia*. For we know that in the Preparation of Alum, a Sort of fossile Coals is dug out of the Bowels of the Earth, or a black, inflammable, bituminous Earth, in which the sulphureous and aluminous Salt is lodged: This Earth is afterwards laid in a Heap, and being moistened by the Rain it not only becomes violently Hot, but also sends up a Smoke, and sometimes an open Flame; from no other Cause but that the sulphureous Acid of the Alum, being dissolved, attacks the sulphureous and bituminous Earth; Thus by the mutual Action and Reaction of their Parts, the Sulphur is not only rendered warm, but also upon a Commotion from the Air, is plainly converted into Fire. Our Doctrine is also confirmed by a curious Experiment, in which, if burnt Alum is mixed with any sulphureous inflammable Substance, a Mass is obtained, which when exposed to the free Air, spontaneously becomes hot, takes Fire, and burns.

After an Enumeration of these Observations and Experiments, relating to the Origin of Fire, it will be no hard Task to ascertain the Origin, and genuine Causes, of that subterraneous Fire, which is the Cause and Source of the Heat in hot Springs, of Earthquakes, and of burning Mountains; for when the Sulphur, by the mutual Action of the various bituminous, chalybeate, vitriolic and sulphureous Minerals, is agitated by a violent internal Motion, and the Air contained in the Caverns of the Earth, by blowing upon it, increases the Heat, and excites a greater intestine Collision and Motion, a violent Fire may be produced, which spreading further through the subterraneous Passages, often shakes large Tracts of Land, excites subterraneous Lightnings and Thunders, and sometimes raises into the Air large Quantities of Earth and Rocks. These Phenomena are most frequent in Places washed by the Sea, and in which the Sea-water, by secret Conveyances, rushing into the subterraneous Cavities, forces the Air, contained in them, into a smaller Space, and thus excites a Wind. Thus 'tis known, that Waters, by their Fall into Caverns, may excite a Discharge of Winds, through certain Passages, which in many Parts correspond to Bellows. On the contrary, where a strong Gale is wanting, and the Places are remote from the Sea, as the middle Parts of *Germany* are, a great Heat is, indeed, produced, but the Fire pent up, never breaks out into an open Flame. It nevertheless diffuses far and near hot Exhalations, which passing through the Pores and Chinks of the Earth, render the Waters, which flow along them, hot.

It may possibly at first seem hard to explain, by what means the continual Heat, for so many Ages, communicating the same Degree of Warmth to these Waters, can subsist in the subterraneous Cavities. But this is not so hard to be accounted for as some imagine; since we are not to suppose that there is a scanty penurious Store of these Minerals in the Bowels of the Earth; but rather an inexhaustible Fund of Sulphur, Bitumen, and vitriolic Marcasites. A memorable Instance of this, is found at *Alt-Sattel* in *Bohemia*, where for above two Centuries, Sulphur, Bitumen, and Vitriol have been obtained from the Earth; as also at *Puzzolo* in *Italy*, where for many Centuries, Alum and Sulphur, have been prepared; and yet there still remain large Quantities of these Ores. Besides, when in the subterraneous Passages by the Access of the Water, producing the mutual Action, and Reaction of these Minerals, the Sulphur is once put into a violent igneous Motion, this intestine Motion readily finds similar Materials to act upon; and thus it easily propagates itself, and communicates the like Motion, to the pinguious inflammable Substances, the most considerable of which is the bituminous, inflammable Earth of fossile Coals.

'Tis also certain, from frequent Observation, that all Fire pent up, and preserved from the free Access of the Air, is not easily dissipated, but burns for a longtime, without any considerable Waste of its *Pabulum*. They, who have been present at the Burning of Houses, know that in the Joists, buried under the Rubbish, the Fire has remained very long, even many Days after the Burning has been begun. The same happens to fossile Coals, which, it once set on Fire, it retains it for a long time under the Ashes. It is also curious to observe, that in *Papin's* Machine, which is so closely shut up, that neither the Air, nor the Steam of warm Water can get out, the hardest Fleashes may be boiled by the Help



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of a very few live Coals, over which when this brazen Machine is placed, it not only conceives the Heat soon, but retains it long. And, to draw an Instance from the human Body, this noble Structure, when the Pores are closed up, and Perspiration obstructed, is, in Fevers, far more afflicted with intense Heat, than when the hot Vapours are freely dissipated and eliminated thro' the cutaneous Pores. In like manner the hot subterraneous Exhalations, when not dissipated in the free Air, but, as it were, re-sorbed by themselves, in consequence of a repeated Gyration, last long, and are not soon consumed.

We are furnished with a memorable Instance of long-concealed Fire in the Coals of a Mountain near *Zwickavia*, in the Marquisate of *Meissen*; for the People of the Neighbourhood inform us, that, above a Century ago, this Mountain was set on Fire by the *Swedes*, and burned so long, that there was a Necessity for filling up its gaping Chinks and Cavities with Earth, and by that means suffocating the Fire. But about fifteen Years ago, when these Cavities were again opened, their internal Parts were found burning, and there was a second Necessity for filling up the Chinks. Above an hundred Years ago, *George Agricola*, in his Treatise *de Ortu & Cauſſ. Subterr.* mentions this Mountain, and in his Treatise *de Natura eorum quæ effluunt ex Terra, Lib. 4. Cap. 17.* he speaks in the following manner: "There is a Mountain near *Zwickavia*, in the Marquisate of *Meissen*, which burns continually, whilst Cavities are gradually formed on its Surface, at which if any one looks, they resemble burning Furnaces; and any combustible Substance which comes within four Feet of them, is set on Fire." He, also, informs us, "that in many Parts of *Germany*, burning Vapours are emitted in the Night, especially in *Meissen*, near the River *Muldah*, through all the Fields between *Zwickham* and *Glauch*." *Laurentius Gryllus*, also, mentions this Mountain in the following manner: "Near *Zwickavia*, is a Mountain which burns perpetually, just as Mount *Vesuvius* did in the Days of *Trajan*, and discharges a sulphureous Substance useful in Medicine."

Neither is it to be doubted, but in the Place where the *Caroline* Springs appear, there were formerly apparent Fires, which, being now latent and concealed, by dissipating and dispersing their hot Vapours thro' the Surface of the Earth, render the Waters descending from the high Hills warm. *Agricola*, in his Treatise *de Re Metall.* confirms this in the following manner: "These Places seem scorched, because Fires once burned in them, and the Remains of these Fires are generally found in the Bowels of the Earth, as is observable in the Fields of *Elbog*, between *Leſſau* and *Cubna*; for in these Fields, testaceous Earths, somewhat burn'd, are dug up: Nor is this to be wondered at, since in these Parts the Earth is sulphureous, and a Bitumen is dug up near *Sattel*, and the *Caroline* Springs are only eight Miles distant from that Town, which receives its Denomination from the *Plain of Falcons* [*Planities Falconum*], in that Part which is called the *Burning Hill*."

But there is a still more memorable Proof of this in *Bogisl. Balbini Histor. Regni Bohem. Cap. 32.* where the Author speaks in the following manner: "The District of *Elbog* abounds with fossile Coals; but they are not used by the Inhabitants, who are provided with large Quantities of Wood. At *Falkenaw*, near the River *Egra*, hard by *Konigswber*, where *St. Cunigund's* Church stands, is a Mountain, or rather a Cavity, or large Hollow, which formerly did much Harm to the Neighbourhood. The subterraneous Fires prey upon the Bowels of the Mountain, and if a Person applies his Ear to the Ground, which I did, he hears within such a Noise of Winds, or Flames, that Fear represents to the Mind a Picture of a lesser *Vesuvius*. This Mountain burns in the Night, and even in the Day-time, when there is any considerable Change of the Atmosphere; and the People of the Neighbourhood have frequently perceived a kind of Earthquake, and a Roaring in the Bowels of the Earth. The Persons who live near this Part, tells us, that formerly there were iron Mines in it. There are, also, mix'd fossile Coals, but black, and already, as it were, consumed by the Flames; such as *Bæcius* informs us, are sometimes found in the other Parts of *Bohemia*." This Passage sufficiently evinces, that there were formerly subterraneous Fires in these Parts.

'Tis, also, to be observed, that the Earth near the *Caroline* Springs is found warm. This is, also, the Reason why, at *Carlesbad*, on account of the subterraneous Heat, Cellars cannot be dug under Ground, but must be made in the adjacent Mountains. Hence the Reason is obvious, why, in the Town of *Carlesbad*, the Snow is melted as soon it falls, and all around is soon dissolved; so that 'tis plain, that there is a subterraneous Fire under all the Ground on which *Carlesbad* is built, which, when near the Waters, warms them; and when farther distant from them, diffuses its Exhalations, which, mixing with the Waters, impregnate them with an excellent medicinal Virtue; for that these Waters receive their Heat from the Earth thro' which they pass, is sufficiently proved from this, that there are many sweet warm Waters impregnated with no mineral Substance, but exquisitely pure and light, such as *St. John's Bath* at *Lucca*, the Bath at *Pisa*, that of *Siena*, and that of *Cornello*. Of the same Nature

# T H E

are the celebrated *Piperan* Springs in the Country of the *Grifons*, the Waters of which consist of Snow melted on the Tops of the Hills by the Sun, which passing thro' hot subterraneous Places break out warm.

As the constituent Principles of cold and hot medicinal Waters are the same, so they must of course produce the same Effects in the human Body. Now as the various Intentions of Medicine are to remove Obstructions, correct peccant Humours, restore the Strength of the weakened Fibres, and eliminate whatever is noxious and prejudicial to the Constitution, so all these Intentions are excellently answered by warm Springs; for they incide, resolve, colligate, and carry off the stagnant Humours, and by that means remove old Obstructions; they obtund and correct the acid and saline Humours lodged in the *Primæ Viæ*, and resolve the viscid Mucus of the Blood; they dilute crude and ill concocted Juices, and imbibe, sheath up, and disperse the saline Spiculæ with which they are mixed; they restore the Tone of the weakened Solids, and by that means promote the Circulation of the Blood; they, also, promote Excretions of all Kinds, by Stool, Urine, Perspiration, a Discharge of the Saliva, and Vomit, and all this without any considerable Irritation, or Loss of Strength; they have, also, a Tendency to remove Plethoras, Cachymies, and preternatural Commotions of the Humours, the fruitful Sources of Diseases; they are excellently adapted to Disorders of the Stomach, such as an uneasy Inflation of it producing an Anxiety of the *Præcordia*; they extinguish Thirst, excite the Appetite, remove a Sense of Weight in the Stomach, and check the Vomiting of a viscid Matter in the Morning; they remove a Lubricity and Falling down of the Anus, and cure a *Tenesmus*, by restoring Strength to the Fibres; they are, also, of singular Efficacy in Cachexies, Scurvies, a Jaundice, Melancholy, hypochondriac Disorders, Dropsies, obstinate Quartans, and other intermittent Fevers; they are, also, proper for checking all immoderate Hæmorrhages, whether from the Stomach, Uterus, or Veins of the Anus; though in such Cases they are to be used with great Caution, and when the Menses or Hæmorrhoids, either are not duly discharged, or totally suppressed, nothing is more effectual for restoring them to their natural State, than hot mineral Waters. These Springs, by cleansing the urinary Passages, prevent Gravel and Dysurics; they free the pulmonary Vessels from Infarctions, and by that means render Respiration freer in a moist Asthma; nor are they prejudicial to phthisical Patients, especially if their Disorder proceeds from Obstructions of the Viscera; for which Reason, *Morton*, in *Phthisiol. Lib. 2. Cap. 2.* recommends the *Islington* Waters in a Phthisis. They, also, produce happy Effects in arthritic, rheumatic, and gouty Patients. When used externally in Bathing, they soften hard Tumors, open the Pores of the Skin, strengthen the nervous and muscular Parts, whose Tone is weakened by Defluxions of Humours, and relax Parts affected with Spasms or Rigors; for which Reason they are highly beneficial to paralytic Patients, and those afflicted with Contractions, Imbecillity, Languor, Pains, or Tumors; they, also, remove Defecations of the Skin, and cure the Itch, Impetigo, and Leprosy. But as the most salutary Remedies are not proper on all Occasions, so the Use of hot Springs is dangerous in Cases where the Viscera are indurated and scirrhus; where the Humours are extravasated in the Cavities of the Head, Thorax, or Abdomen; where the Stomach, Lungs, Mesentery, and Intestines, are exulcerated, or affected with an Empyema, or Abscess. The Use of these Waters is, also, prejudicial to those who are disposed to an Apoplexy, an Epilepsy, an inveterate *Hemicrania*, and a Privation of Memory, or of the internal or external Senses. Nor are these Waters proper for those afflicted with a convulsive Asthma, a Polypus of the Heart, a Dropsy of the Breast, a confirmed Phthisis, Cancers, spreading Venereal Ulcers, or a Gleet. These Waters are, also, to be cautiously used in all Kinds of Inflammations, whether external or internal, till the Force of the Disorder is allay'd.

Before any Cure is attempted by the Use of hot Springs, if the Body is full of Blood and Juices, a Vein is previously to be opened, that the Waters to be drank, may meet with no Resistance. Then the *Primæ Viæ* are to be cleansed from the Sordes, lest the Waters passing quickly thro' those Parts, should carry the recrementitious Matter along with them; or lest that Matter should prevent the medicinal and salutary Operation of the Water. Purging is by no means to be attempted by drastic Remedies, which destroy the Tone of the Stomach and Intestines, but rather by mild Preparations of Manna, Rhubarb, and proper Salts, which operate without impairing the Strength. And this Evacuation is to be used not only in the Beginning of the Cure, but, also, during its Progress, and after it is over. Nor is the Stomach to be loaded with too large a Quantity of these Waters, but they are at first to be drank sparingly, and afterwards, more liberally. A proper Regimen and Exercise are, also, necessary, always avoiding tumultuous Commotions of Mind, and the Occasions of Sorrow and Sadness, lest by neglecting these, the salutary Effects of the Waters should be prevented. In drinking all medicinal Waters, the Stomach ought to be fortified with Corroboratives and Balsamics, by which means salutary and laudable Fluids are generated and distributed thro' all the Parts of the Body.



# T H E

Body. As the *Thermæ* are actually hot, and the *Acidulae* actually cold, so they are to be duly distinguished, and judiciously prescribed, both with respect to the particular Disease, and the Constitution of the Patient. They differ, also, in this, that the *Acidulae* contain a volatile, and the *Thermæ* a fixed Salt. There is, also, more of a subtile Vitriol in the cold, than in the hot Springs; tho' some of the latter, such as those of *Aix la Chapelle*, contain common Sulphur in Substance. Cold Springs, also, contain a larger Quantity of mineral Spirit, than the hot Springs, which, by reason of their Heat, are easily deprived of it.

From a Knowledge of these Differences, arise some very useful Rules in Practice. Thus, for those who have small Vessels, tender and delicate Fibres, and weak nervous Systems, subject to frequent Spasms, the hot Springs are more beneficial and proper, than such as are cold. But Persons of more robust Constitutions, in whom the Texture of the Fibres is more firm, and the Obstructions and Disorder obstinate, require stronger Waters, both of the cold and hot Kind, since they can bear them better than Persons of tender, delicate, spongy and lax Habits, to whom the fine, light, and subtile Waters are more beneficial. As for the external Use of hot Springs, those which have an heavy hard Water, strongly repel, and for that Reason easily excite Fevers, Head-achs, and Thirst, by forcing the peccant Matter inwards from the Surface of the Body; for which Reason they are to be cautiously used: Whereas those hot Springs, whose Waters are mild and soft, soften the hard Parts, open the Pores, promote the Excretions, and draw the peccant Matter from the Centre to the Circumference of the Body.

With respect to the Nature, Difference, and Use of these Waters, 'tis to be observed, that the cold Springs are possessed of a more noble and efficacious Quality, than the hot, on account of the large Quantity of mineral Spirit it contains. Cold Waters are, also, lighter, and more subtile, than those of the hot Kind, which, by their Heat, dissolve and carry off many coarse Substances lodged in the Bowels of the Earth. 'Tis, however, certain, that more Harm is done by cold, than by hot Springs. But this, in my Opinion, is owing to their being drank cold, especially upon an empty Stomach in the Morning. Hence I would advise all *Acidulae* used in the Morning, to be drank not cold, as they come from the Fountain, but tepid. But as by the Heat, the subtile Spirit with which they abound, may be evaporated, I would advise them to be put in close-stopt Vessels, which are to be immersed in boiling Water.

With respect to the external Use of hot Springs, a great Error is very frequently committed in using the Bath too hot; for by the external Heat, the Blood and Humours are thrown into a violent intestine Motion, and preternatural Expansion, by which means a Palpitation of the Heart, Anxiety of the Præcordia, Head-achs, Inquietudes, and Loss of Strength, are produced. And the Injury is the greater, the more the Body abounds with impure Blood and Juices, since by this means the redundant Blood acts more forcibly upon the Parts, and vitiates them; and the Sordes are, by the Heat, rendered more subtile and acrid. *Frederic Hoffman.*

**THERMANTERION**, from θερμαίνω, to render hot. A Chafing-dish.

**THERMASMA**, θερμασμα, from θερμαίνω, to render hot. A warm Fomentation, recommended by *Hippocrates*, for easing Pains in a Pleuresy: Or, as *Galen* explains it, any thing which warms the Body.

**THERMEMERIA**, θερμμερία, from θερμός, warm, and ημέρα, a Day; in *Hippocrates*, *Lib. de Natura humana*, is the kindly Warmth of a vernal Day.

**THERMINTHUS**. The same as **TERMINTHUS**.

**THERMOCOELIOS**, θερμοκοίλιος. A Person who has an hot Stomach. *Hippocrates*, *Epidem. L. 6.*

**THERMOLE**, θερμωλή, the same as θερμότης (*Thermotes*) or θερμή (*Therme*), Heat, Warmth; in the *Ionie* Dialect, signifies the same as πυρετός (*Pyretos*), a Fever, as is observed from *Corinthius*.  *Erotian*, also, expounds θερμωλή by πυρετός, but observes, at the same time, that the Word, in *Hippocrates*, signifies all manner of Heat. The Word occurs several times, in *Lib. de Locis in Homine*, where, indeed, it signifies Heat, but such as is immoderate and preternatural.

**THERMOLITHUS**. Offic. *Lapis Schistos*. Charlt. 17. *Lapis Schistus Cornubiensis diu Calorem retinens*. Mer. Pin. 214. **THE WARMING STONE**.

It is found in the County of *Cornwall*. I meet with this Stone, says *Dale*, in the Catalogue of Official Simples, at the End of *Shipton's* Pharmacopœia, but nothing of its medicinal Use occurs in Authors.

**THERMOMETRUM**, from θερμός, hot, and μέτρον, a Measure. An Instrument contrived for measuring the Degrees of Heat in any Body; of these there are many Sorts. See **IGNIS**.

**THERMOPOLIUM**, θερμopolιον, from θερμός, hot, and πωλείω, to sell. A publick House, where warm Liquors were sold among the Antients, as they are at the modern Coffee-houses.

**THERMOPOSIA**, θερμοποσία, from θερμός, hot, and πίνω, to drink. The drinking of warm Liquors.

# T H E

**THERMOS**, θερμός, from θίγω, to heat. Hot, warm. *Θερμός*; *Thermon*, in the Neuter Gender, is sometimes spoken of a Quality, sometimes of a Substance, as *Galen* observes, *Com. ad 1 Aph. 14*. *Thermon*, in the latter Signification, Heat, in *Hippocrates*, is, also, of two Sorts; one ἐμφύτιον (*emphyton*) native, or natural; the other igneous, mordaceous, and preternatural, according to *Galen*, *Com. in 6 Epid. Sect. 4. Aph. 23*. The θερμὸν ἐμφύτιον, or natural and innate Heat, was deny'd by *Asclepiades*, *Praxagoras*, *Philotimus*, and *Erassistratus*, who asserted it to be acquired, and not innate. It is defined, A Substance in its Nature always moveable the first in an Animal, as being generated, and innate from the Beginning; for Nature itself, and the Soul, are nothing but innate Heat. The Motion of the natural Heat, both internal and external, is perpetual; and is, therefore, always moveable while it is moderately kindled, and while it is moderately extinguished, as *Heracitus* said. The natural Heat is compounded of Heat and Cold, otherwise it would not be perpetually moveable; for since it is the Nature of Heat to be always expanding and mounting, it would soon be dissipated, were it not restrain'd, and repelled inwards, by the Cold, and so prevented from destroying itself by Extension. Thus *Galen*, *Lib. de Tremor. Palpit. &c.*

**THERMOSCOPIUM**. The same as **THERMOMETRUM**.

**THERMOSPEDIA**, θερμospodia. Hot Athies. *Dioscorides*.

**THEROS**, θέρω. The Summer.

**THESIS**, θέσις. The Position, Situation, or Connection of the Parts of the Body.

**THESPIANA**, or **THIESPESIANA**, θεισπιανή, or θεισπιανή. The Name of an Antidote, or Confection described by *Galen*, *L. 7. de Comp. M. S. L. Cap. 3.* and by *Actius*, *Tetrab. 2. Serm. 4. C. 65*. It is intended for Suppurations in the *Thorax*, and internal Abscesses.

**THESSALICUS**. A Physician of the Sect of *Theffalus*; that is, the *Methodic*.

**THESSALICUM SEDILE**, the *Theffalian* Chair, so called from *Theffaly*, the Country where Chairs of this Figure were most in Use, is recommended by *Hippocrates*, *Lib. de Artic.* in place of a Machine for reducing a recent Luxation of the Shoulder-bone. The Back of this Chair is perpendicular to the Seat, as *Galen* tells us; by which Construction it is distinguished, and accommodated to the Operation; which see described from *Hippocrates*, under the Article **AMBE**.

**THEOU CHEIR**. Θεῶ χεῖρ. The Hand of God. The Name of an Antidote prepared of Goats Blood, and recommended in the Stone and Gravel by *Actius*, *Tetrabib. 3. Serm. 3. Cap. 12.* from *Phlagyrius*.

**THEXIS**, θήξις, from θίγω, to pierce with a Needle, or the like Instrument, or, as *Hesychius* expounds the Verb, to whet, or sharpen; is a Puncture with a Needle. Hence κατὰ θήξιν θειραπεία, is the *Greek* Phrase for the Treatment of Wounds by Suture, or the Operation of the Needle, mentioned by *Archigenes* in *Galen*, *Lib. 2. κατὰ τὸν*. There are two other Ways of uniting the Lips of Wounds there mentioned, one by ἀγκυριαμύς (*Ankyriasmus*), or by Help of the *Ankyler* [see **ANCYLER**]; the other by a *Syssarcosis*, that is, by filling up the Interval with new Flesh.

**THISMA**. Beds, and subterraneous Veins of Minerals.

**THLASIAS**, θλασία. An Eumuch made by the Compression or Contusion of the Testicles.

**THLASIS**, **THLASMA**, θλάσις, θλάσμα, from θλάω, to contuse. A Contusion, or Collision, a Wound in the Flesh, or Muscles, from a blunt, or heavy Weapon. *Thlasma* is defined by the Author of the *Definit. Medicæ*, "A Recels of the Cranium inwards, without a Fracture, and principally incident to Children; it may be the more clearly conceived by observing what happens to tin Vessels." The same is called *Thlasia* in *Galen*, *Lib. 2. de Caus. Morb.* The same Author, in his *Exegese*, expounds θλάσις, by τὸν ἐμβρυοσθλάσιν, ὅπερ καὶ πύρετον καλεῖται, "an Embryo-thlasia [an Instrument contrived for the Contusion of the dead Fœtus] which, *Lib. 1. περὶ γυναικ.* is, also, called *Pustron*." See **PIESTRON**.

**THLASPI**.

The Characters are;

The Fruit is roundish, flat, generally surrounded with a foliaceous Border, and, for the most part, cloven on the upper Side, and divided into two Capsules full of flat Seeds; the Leaves are not divided, but entire.

*Boerhaave* mentions thirteen Sorts of *Thlaspi*; which are,

1. *Thlaspi*; arvense; filiquis. *latis. C. B. P. 105. Tourn. Inst. 212. Boerb. Ind. A. 2. 7. Thlaspi. Offic. Thlaspi Dioscoridis Ger. 204. Emac. 262. Raii Hist. 1. 831. Synop. 3. 305. Thlaspi Drabe folio. Park. Theat. 835 Thlaspi cum filiculis latis. J. B. 2. 923. TREACLE MUSTARD.*

This Kind of *Thlaspi* has a small, white, fibrous Root, sending forth firm Stalks about a Foot high, beset with smooth, jagged Leaves from a broad Base, ending in a sharp Point. On the Tops of the Stalks grow small, four-leaved, white Flowers, succeeded by large, broad, flat, and round Seed-vessels, having foliaceous Borders divided into two Cels, with a Slit on the Top, containing small, round, redish brown Seed, of an hot biting Taste. It grows